Linking Agriculture and Tourism

A Qualitative Study on the Status and Perspectives of the Kazbegi Region in the Greater Caucasus

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submitted by

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Abbreviations and Acronyms

ACDA	Agricultural Cooperative Development Agency
APA	Agency for Protected Areas
a.s.l.	above sea level
AMIES	Analysing Multiple Interrelationships between Environmental and Societal Processes in Mountainous Regions of Georgia
CIS	Commonwealth of Independent States
DCFTA	Deep and Comprehensive Free Trade Area
EFTA	European Free Trade Association
e.g.	exempli gratia (for example)
EI	Expert interview
ENPARD	European Neighbourhood Programme for Agriculture and Rural Development
EU	European Union
FAO	Food and Agriculture Organization
FGD	Focus group discussion
GDP	Gross Domestic Product
GEL	Georgian Lari
Geostat	National Statistics Office of Georgia
GFA	Georgian Farmers‘ Association
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit (German Society for International Cooperation)
ha	Hectare(s)
HACCP	Hazard analysis and critical control points
i.e.	id est (that is)
kg	Kilogram
LAG	Local Action Group
LEADER	Liaison Entre Actions de Développement de l'Économie Rurale
Mab	Man and biosphere
MEPNR	Ministry of Environment Protection and Natural Resources

MoA	Ministry of Agriculture
NATO	North Atlantic Treaty Organization
NEO	New Economic Opportunities Initiative
NGO	Non-governmental organization
NRDP	New Rural Development Paradigm
ODA	Official Development Assistance
OECD	Organisation for Economic Co-operation and Development
PIN	People in Need
QDA	Qualitative data analysis
SFSC	Short food supply chain(s)
UN	United Nations
UNESCO	United Nations Educational, Scientific and Cultural Organization
USAID	United States Agency for International Development
USSR	Union of Soviet Socialist Republics
ZEU	Center for international Development and Environmental Research, Justus Liebig University Giessen

1 Introduction

This chapter contains a description of the background, problem statement and aim of the research, as well as the structure of this thesis.

1.1 Context of this Research and Problem Statement

As in many transition countries, rural-urban migration as well as migration from the agricultural sector also takes place in Georgia. One reason for this is the fact that the majority of the rural population still has difficulties adapting to changes in the socio-economic framework conditions since the break-up of the Soviet Union and is thus not able to tap existing potentials. This also applies to the Kazbegi region, a mountainous area in the Greater Caucasus of Georgia. During Soviet times and at the beginning of the transition period, the main agricultural activities were vegetable production in greenhouses based on gas supply from Russia, and livestock husbandry. With the break-up of the Soviet Union this situation has changed. Pastures are no longer available across borders, and since 2005 gas is no longer provided for free (GeoWel Research 2016, p. 18; Deutsche Forstservice GmbH and AGEG Consultants eG 2010a, p. 49 f.). For this reason, agricultural production has decreased, particularly greenhouse vegetable production and sheep breeding. Furthermore, land reforms have led to small plot sizes. Nevertheless, with the change in the political system, agricultural producers also have the opportunity to become economically active as individuals, since centrally planned agricultural production (e.g. in the form of kolkhozes or sovkhozes) does not exist anymore. Although these changed conditions offer new opportunities such as individual entrepreneurship activities based on market demand, many small-scale agricultural producers still produce mainly for their own consumption. They have thus not yet adapted to the new framework conditions and are not able to tap potentials. Thus, the main activity in the region is still subsistence farming, with only a few agricultural producers being commercially active. During the last decade, tourism in the Kazbegi region has been on the rise (Thielen 2018, p. 34). One reason for this might be the beautiful nature and mountains of the region. The growth in tourism, which can be taken as another change in framework conditions, could also provide opportunities for small-scale agri-food producers to increase their income by marketing their surplus production to the local[1] tourism sector and thereby improve their livelihoods. In turn, an increase in the local agri-food products offered might have a positive effect on the development of the tourism sector. Establishing linkages of agricultural food production and rural tourism might contribute to the economic development of the region and could even counteract the migration that has been occurring to the capital and away from the agricultural sector.

The overall theoretical framework of this study is provided by the theory of cultural lag of William F. Ogburn (Ogburn 1964, p. 86 ff.). Ogburn speaks of a “cultural lag” in cases where there are two fragments of culture which were formerly adjusted to each other but are not anymore because one part has changed more rapidly than the other (Duncan 1964, p. 86). The

[1] The terms local and regional will be used interchangeably in this study.

part of culture which initially changes is called the independent variable. It can for example be a political or a technological variable. The dependent variable is the part of culture which lags behind (Duncan 1964, p. 91). In this study, it is assumed that the independent variable is the framework conditions for agricultural production that have changed dramatically since the collapse of the Soviet Union (no further gas supply from Russia, loss of Russia as an export market, loss of pastures, small size of land parcels due to land reforms, entrepreneurial opportunities, and also growth of tourism). The dependent variable is defined as the income generating behavior of small-scale agri-food producers. As mentioned above, the change in the framework conditions also provides opportunities for marketing local agri-food products: The growing number of tourists in combination with the opportunity to become an entrepreneur offers opportunities for small-scale agri-food producers to increase their income, for example through selling local food products to the tourism sector. However, to date the small-scale producers have not yet adapted their income generating activities to the new situation, which is shown by a high proportion of subsistence farming. Thus, so far, such linkages of agriculture and tourism are not in place. This might be due to several hurdles for the small-scale agri-food producers, such as a lack of knowledge and business skills.

Rural development projects might help producers to overcome the hurdles and to adjust to the ongoing changes. In particular, approaches which include the local population in the strategy development (bottom-up) and which are context specific and do not focus only on one particular sector seem to be promising currently. Linkages of agriculture and tourism are promoted by various development approaches.

Against this background, the overall aim of the study is to identify options for the small-scale agri-food producers that will enable them to more quickly adapt to the changed framework conditions in agricultural production (and thereby decrease the lag between the dependent and the independent variable) by trying to find ways to link agricultural activities to the growing tourism sector. In this respect, the aim is to analyze the current status and possibilities for linking agriculture and tourism, and based on that to derive perspectives for linkages in the Kazbegi region. In particular, the aim is to identify ways in which small-scale agri-food producers could market their products to the tourism sector in order to improve their income generation, as well as to consider the challenges that this might entail. To this end, a qualitative study is implemented, encompassing interviews and focus group discussions with the local population as well as expert interviews. The study can be embedded in the broad field of multi-sectoral, bottom-up development approaches that aim to improve the livelihoods of small-scale agri-food producers.

The study has been developed within the framework of the project "AMIES II – Scenario development for sustainable land use in the Greater Caucasus, Georgia".[2] The implementation of this study was embedded in the AMIES II project unit on socio-economics.[3]

1.2 Structure of this Thesis

While in chapter 1.1 the general context of the research and the issues of interest have been briefly described, chapter 2 introduces Georgia and the study region Kazbegi. It provides an overview of the socio-economic and political developments in the course of transformation, as well as on agriculture and tourism.

Chapter 3 describes the conceptual background of the study. It includes a brief outline of the theory of cultural lag of William F. Ogburn, which provides the overall theoretical framework of the study. Furthermore, a description of relevant rural development theories and strategies as well as aspects of linking agriculture and tourism based on a literature review are included. Based on this, the research gap and the research questions are provided. Although the final research questions have emerged *only after the pre-study* (see chapter 4.1. for the research process), the research questions are already presented to the reader in chapter 3 for the sake of clarity. The decision for this structure is based on the statements of Kruse (2015, p. 628 ff.), according to whom, in the case of qualitative studies a field of tension exists between structuring a work according to the real process of the study, and traceability and comprehensibility for the reader.

Chapter 4 contains a description of the methodology and the study design, as well as the specific methods and the types of analyses conducted. It also describes the preparation and implementation of the study phases, the results of the different study phases and the condensed findings.

Chapter 5 encompasses a critical discussion of the study design and the methods and the data, as well as a discussion of the results. It includes the elaboration and discussion of perspectives of the Kazbegi region in the field of linking agriculture and tourism on the basis of two

[2] The AMIES II project was implemented between 2014 and 2018 as a follow up of the project "AMIES - Analysing Multiple Interrelationships between Environmental and Societal Processes in Mountainous Regions of Georgia" which had been implemented between 2010 and 2013. As the preceding project, the AMIES II project was a binational German-Georgian research project implemented under the leadership of the Center for international Development and Environmental Research (ZEU) of Justus Liebig University Giessen in cooperation with Ilia Chavchavadze State University and the Ivane Javakhishvili Tbilisi State University in Georgia. Both projects were funded by the Volkswagen Foundation. In the AMIES II project, in addition the Agricultural University of Georgia was involved. The AMIES II project consisted of four interdisciplinary project units ranging from landscape ecology, soil science, and vegetation ecology to socio-economic issues. This study was implemented within the framework of the project unit on socio-economics. This project unit consisted of the following members: Prof. i.R. Ingrid-Ute Leonhäuser, Prof. Joachim Aurbacher, the author of this study/the PhD student (all Justus Liebig University Giessen, ZEU), Prof. Dr. Joseph Salukvadze and two Master students (all Ivane Javakhishvili Tbilisi State University) and Prof. Dr. David Bedoshvili and the PhD student Rati Shavgulidze (both Agricultural University of Georgia).

[3] The project unit on socio-economics consisted of a qualitative research part (implemented by the author) and a quantitative research part (implemented by Rati Shavgulidze of the Agricultural University of Georgia, who in the following is called the "Georgian project partner").

scenarios. The chapter also tries to answer the question of whether the research gap could be closed. Chapter 6 contains the conclusion and recommendations, chapter 7 and chapter 8 summarize the study, and chapter 9 lists the references.

2 Georgia and the Study Region Kazbegi

This chapter introduces Georgia and the Kazbegi region. It describes the socio-economic situation as well as political and economic transformations. Furthermore, the development in agriculture and tourism in Georgia and the Kazbegi region are outlined. It is mainly based on statistical data and reports from the National Statistics Office of Georgia (Geostat), the Ministry of Agriculture of Georgia and the National Tourism Administration, as well as on project reports and other literature on Georgia.

2.1 The Political and Economic Transformation of Georgia

Georgia is located between the Black Sea and the Caspian Sea (though only having access to the Black Sea), between Eastern Europe and Central Asia. Bordering Turkey, Armenia and Azerbaijan in the south, it is bordered by the Russian Federation in the north. It has an area of approximately 70,000 km² and with more than 80% of the territory being located 400 m a.s.l., and 55% even above 1,000 m, it is characterized by mountainous landscapes. The northern part of the country is shaped by the Greater Caucasus, with mountains of more than 5,000 m height, while the south is shaped by the Lesser Caucasus Mountains. The climate of most of Georgia is subtropical (Bondyrev et al. 2015, p. 1 f.).

While Georgia is today an independent state, until 1990 it was part of the Union of Soviet Socialist Republics (USSR) (Salukvadze 2008, p. 4). During Soviet times governance was characterized by "[…] authoritarian rules with high level of corruption, especially state capture, non-transparency of decision-making process, non-participation of the population, secrecy of information, etc." (Salukvadze 2008, p. 8). Though the aim was to change this situation with independence, this is still an ongoing process. Since the declaration of independence of Georgia from the Soviet Union in April 1991, Georgia has faced several drastic challenges in the form of civil wars, loss of territorial sovereignty, and a tremendous economic decline in GDP (Bertelsmann Stiftung 2018, p. 4; Chkoidze 2009, p. 62; Heiny 2018, p. 11).

A coup d'état led to the failure of the first president (Bertelsmann Stiftung 2018, p. 4), and the second president resigned following the bloodless mass protests of the "Rose Revolution" in 2003 (Bertelsmann Stiftung 2018, p. 4; Chkoidze 2009, p. 59; Heiny 2018, p. 11). In 2004 the Western-oriented Mikheil Saakashvili was elected and again re-elected in 2008 (Heiny 2018, p. 11; Bertelsmann Stiftung 2018, p. 4).

In 2012, the opposition political alliance "Georgian Dream" of the billionaire Bidzina Ivanishvili won the parliamentary elections, and he also won the presidential elections in 2013 (Bertelsmann Stiftung 2018, p. 4; Heiny 2018, p. 11). The parliamentary elections in 2016, which were observed to be free and fair, led to a re-election of the Georgian Dream party (Bertelsmann Stiftung 2018, p. 8). In July 2016, the "most important foreign policy event" in the form of an Association Agreement of Georgia with the EU came into effect (Bertelsmann Stiftung 2018, p. 6). Though this agreement might provide a guiding line for the development of Georgia in the future, it will probably be a long process to implement European values in the country, e.g. with regard to democracy or good governance. This is also reflected by the problems that the Georgian governments had to face since the breakdown of the Soviet Union with regard to implementing new reforms or legal changes (Bertelsmann Stiftung 2018, p. 31). Moreover, suboptimal governance practices are reflected by the influence of personal relationships on careers and by corruption among state officials (Bertelsmann Stiftung 2018, p. 28, p. 32). The obviously slow process of adapting to the implementation of good practices is also supported by the statement of Salukvadze (2008, p. 8): “A burden of authoritarianism, poor governance and corruption was and still continues to be the biggest obstacle for those countries that experienced longer time of Soviet rule […]”. As in all countries of the former Soviet Union, the political transitions and accompanying hurdles were and are strongly interrelated with the economic developments of the country.

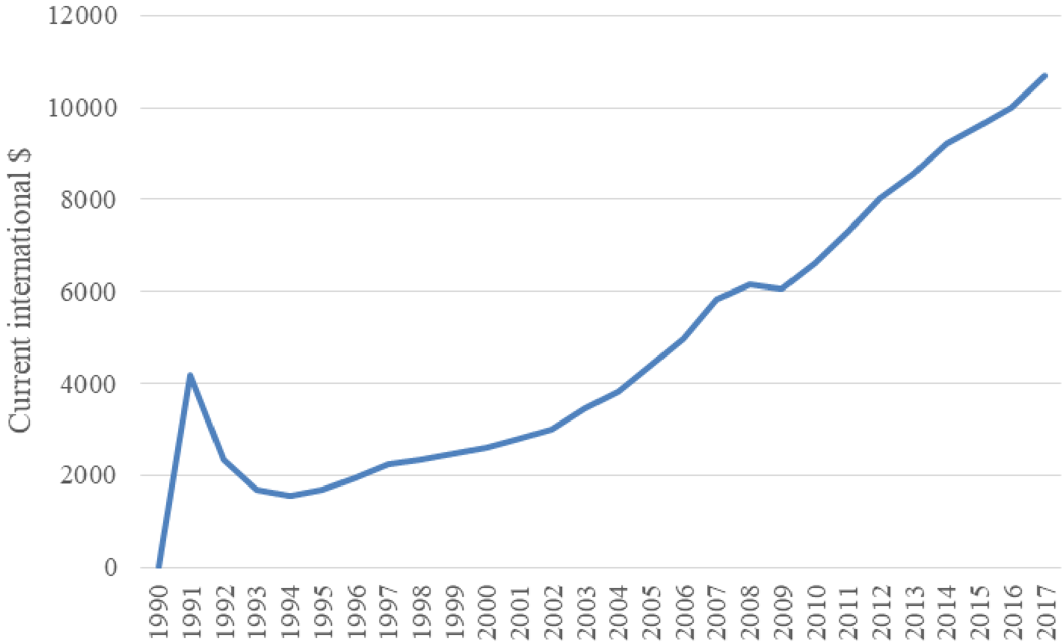


Figure 1: GDP per capita in current international $

Source: Own presentation of data from the World Bank 2018.

While Georgia was part of the USSR, according to consumption per capita and real income it was one of the richest republics of the Soviet Union, together with Latvia and Estonia (Chkoidze 2009, p. 66). However, until 2003, in comparison to 1989 absolute GDP decreased almost by 60% , output decreased by 70% and exports decreased even by 90% (Chkoidze 2009, p. 66). As depicted in the graph above, the gross domestic product (GDP) per capita (in purchasing power parity (PPP)) of Georgia also dropped significantly after the breakdown of the Soviet Union. Economic development after 1991 was mainly impeded by structural problems, corruption and secessionist conflicts (Chkoidze 2009, p. 59, 62, 66). Nevertheless, it must be mentioned that during that period of time, this was the case in all Commonwealth of Independent States (CIS) countries (Kötschau et al. 2009, p. 228).

As can be seen from figure 1, in the second half of the 1990s the GDP per capita began to increase again, but slowly and still at a very low level. Although President Saakashvili managed to regain the secessionist region Adjara after the Rose Revolution, the breakaway regions South Ossetia and Abkhazia continued to remain under Russian influence. The conflict with regard to South Ossetia culminated in a war with Russia, leading to military intervention by Russia in Georgia in August 2008 (Chkoidze 2009, p. 64 f.). This might be reflected in the decline in GDP per capita in 2009 in the graph above.

Even after more than 20 years since the breakdown of the Soviet Union, Russia continues to play a special role with regard to the development of Georgia. This is also shown by the development of the agricultural sector (see chapter 2.2). The conflict regarding Abkhazia and South Ossetia continues until today, as shown by increasing military presence and controls at the borders (Bertelsmann Stiftung 2018, p. 6; Nienhuysen 2018), and while Georgia has good international relations with other countries, "[…] its relations with Russia remain one of the biggest security threats overshadowing Georgia's development" (Bertelsmann Stiftung 2018, p. 28).

Today, Georgian policy is led by the aim to integrate the country into the EU and NATO (Bondyrev et al. 2015 p. 26; Salukvadze 2008, p. 7). One first step in this direction is the above-mentioned Association Agreement of Georgia with the EU (Bertelsmann Stiftung 2018, p. 6; Bentzen 2014). Russia is not in favor of this relationship with the West, and with regard to joining the NATO the Russian prime minister Dmitry Medvedev even threatened Georgia with the potential of a "terrible conflict" (Nienhuysen 2018).

In 2018[4] Georgia had a population of 3,729,600 (National Statistics Office of Georgia (Geostat) 2018b). According to official sources, in 2017 13.9% of the active labor force was unemployed (National Statistics Office of Georgia (Geostat) 2018a). A survey conducted in 2016 even came to the conclusion that 66% of the population consider themselves to be unemployed (Bertelsmann Stiftung 2018, p. 24). However, this is also based on the fact that a high percentage of people living in rural areas are self-employed, which is not officially considered to be employment.

The share of the rural population was 57.2% in 2014, with a constant decline in the rural population since 1989 (National Statistics Office of Georgia (Geostat) 2016, p. 2). Although household[5] income in Georgia has increased in urban and rural areas during recent years (Ministry of Agriculture of Georgia 2017, p. 18), Georgia is still a country with a very high income inequality. This is shown by a Gini-coefficient of 0.41 in 2014, and is reflected by the fact that it "[…] did not bridge the gap between largely urban 'haves' and mainly rural 'have nots'" (Bertelsmann Stiftung 2018, p. 16). Due to these urban-rural inequalities, internal migration from rural to urban regions occurs, with the majority of people migrating to the capital Tbilisi (Ministry of Agriculture of Georgia 2017, p. 10). In rural, often mountainous regions the outmigration is mainly caused by a lack of employment opportunities, which causes in particular the outmigration of younger people (Ministry of Agriculture of Georgia 2017, p.

[4] Most updated data according to Geostat.
[5] In line with the OECD, in the current study "The concept of a household is based on the arrangements made by persons, individually or in groups, for providing themselves with food or other essentials for living" (OECD 2001a).

11). Not only in terms of employment, but also with regard to access to medical care and education, mountainous regions are disadvantaged. Moreover, infrastructure ranging from roads to internet access is insufficient (Ministry of Agriculture of Georgia 2017, p.11 f., 25; Bertelsmann Stiftung 2018, p. 23), which therefore contributes to migration from these areas.

2.2 Georgia's Agricultural Sector

Agriculture during Soviet and transition times

During Soviet times, Georgia's agricultural sector was characterized by large scale agricultural enterprises in the form of sovkhozes and kolkhozes (Kötschau et al. 2009, p. 222). These large-scale collective farms were state-owned and represented the only commercially oriented farms during that time (Ebanoidze 2003). Production was geared towards the export of products to other Soviet countries (Kegel 2003, p. 148), and Georgia was the biggest exporter of vegetables in the Soviet Union (Kötschau et al. 2009, p. 226). Furthermore, it exported tea, fruit and wine (Kegel 2003, p. 152), which it was famous for (Didebulidze and Urushadze 2009, p. 253).

Besides collective agriculture, only a small share (about 4%) of individual agriculture existed (Lerman 2006, p. 115). The rest of the land belonged to the sovkhozes and kolkhozes (Kötschau et al. 2009, p. 222). The land for the individual type of agriculture (0.25 ha per family) was given to households in rural areas by the state in order to produce food for their own consumption; nevertheless, the landowner was still the state (Kötschau et al. 2009, p. 222; Ebanoidze 2003; Lerman 1999, p. 271).

State ownership and farming in the form of collective enterprises are considered to be the main reasons for the inefficiency in agriculture during socialist times (Lerman 2006, p. 114). Thus, the main aim after the collapse of the Soviet Union was the transformation to privately-owned individual agricultural land (Lerman 1999, p. 271). This transformation and privatization process was supported by land reforms, which were implemented in two phases: one in the beginning of the 1990s and the other in 2005 (Kötschau et al. 2009, p. 222). One aim of the land reforms was to ensure food security through subsistence farming during the politically and economically instable times of transition in the beginning of the 1990s (Lerman 2006, p. 1).

The land reform included the privatization of land for private households as well as the opportunity to lease land (Gogodze et al. 2007, p. 2). The leasing component allowed private households to lease agricultural land in addition to the land they owned privately (Gogodze et al. 2007, p. 2). Although the privatization had positive effects and Georgia had already managed to individualize farm structure in the years 1992 and 1993 (Lerman 2006, p. 114), this was also associated with several hurdles. Although land was provided to the households for free, one hurdle was related to the fact that each household could only own a maximum of 1.25 ha of land (Lerman 2006, p. 117). In addition, "each family was meant to receive the same quality of land" (Kötschau et al. 2009, p. 223). Thus, parcels of high-quality land were divided into various plots, leading to families receiving the promised amount of land in different areas. Furthermore, the land market was restricted by the (non-)issuance of land titles. Ownership of land was only completed if the new owner of the land received a certificate and registered the land at the municipality. However, up until today in various cases households have not received the certificates, which are necessary in order to trade the land or use it as collateral for bank loans. (Didebulidze and Urushadze 2009, p. 255; Gogodze et al. 2007, p. 3f.; Ministry of Agriculture of Georgia 2017, p. 20).

Nonetheless, the privatization process led to **major changes in the agrarian structure** (Heiny 2018, p. 13). Large enterprises were closed, machinery was sold, and buildings demolished. In addition to these direct effects, skilled agricultural workers quit their jobs and agricultural science was not further encouraged (Kötschau et al. 2009, p. 224; Ministry of Agriculture of Georgia 2015, p. 15). The products that Georgia had produced for other Soviet countries such as tea, fruit and wine, were no longer sold (Kegel 2003, p. 152), and the export of vegetables decreased by 57% from 1990 to 2007 (Kötschau et al. 2009, p. 226).

Although the privatization process and the increase in subsistence farming enabled the Georgian population to avoid famine (Lerman 2005, p. 1; Kegel 2003, p. 149), the inefficiency of the sector also increased with the fragmentation of land. As can be seen in figure 2, the contribution of agriculture to Georgian GDP decreased rapidly after independence to approximately 9% in 2016 (National Statistics Office of Georgia (Geostat) 2018a, p. 17), which reflects the inefficiency of the sector (Bertelsmann Stiftung 2018, p. 17; Kötschau et al. 2009, p. 227).

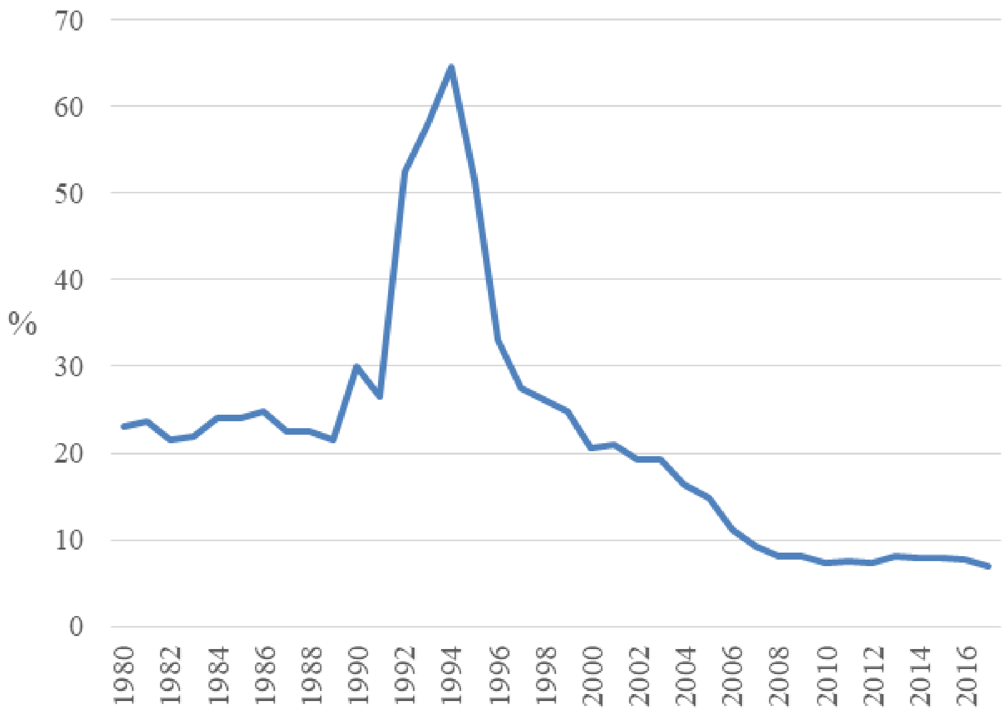


Figure 2: Agriculture, forestry, and fishing, value added (% of GDP)

Source: Own presentation of data from World Bank 2018.

The secessionist conflicts as well as insecurity about land ownership also led to a loss in pastures, which induced a major drop in the number of animals kept on mountain pastures. The development of livestock numbers since 1940 is depicted in figure 3. The graph shows the strong decline in sheep and goats (with the majority being sheep) that occurred after 1990. While before 1990 the number of sheep and goats was considerably higher than that of dairy cows or other cattle, after 1991 the numbers of animals converged and have developed on a similar level since then.[6] While the number of cattle apart from dairy cows also decreased after the independence of Georgia from the Soviet Union, the number of dairy cows remained almost constant. Since the second half of the 1990s, the numbers have been increasing slightly.

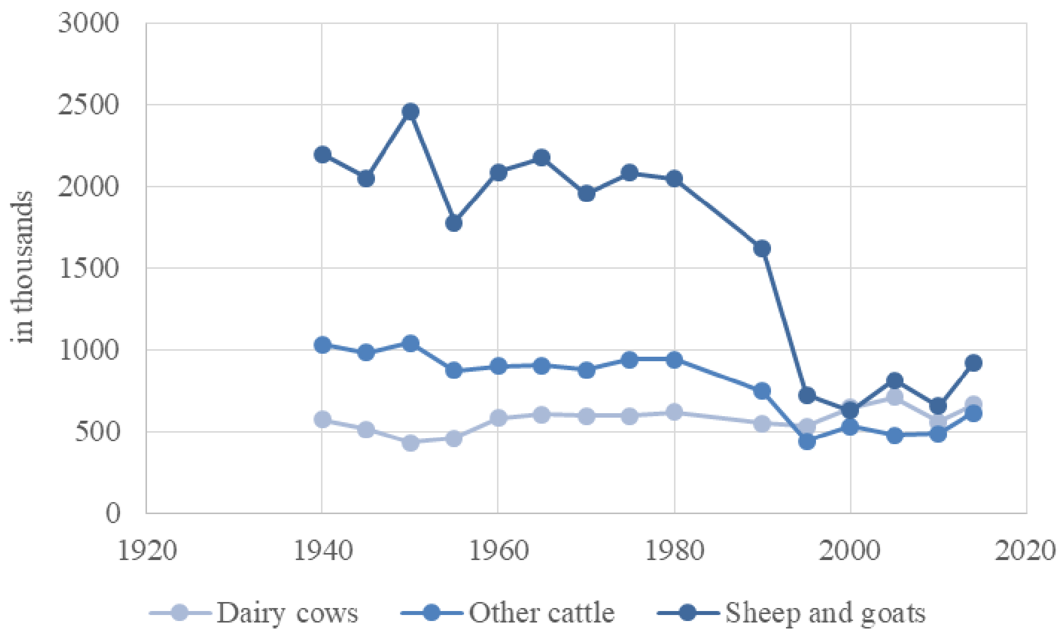


Figure 3: Livestock in Georgia

Source: Own calculations and depiction based on data from National Statistics Office of Georgia (Geostat) 2015, p. 57 f.

The Russian embargo imposed in 2006 on wine, fruit and vegetables and other goods had further negative effects on exports and the added value of agriculture (Livny et al. 2009, p. 178), as well as on the livelihoods of the Georgian population (Didebulidze and Urushadze 2009, p. 252). However, through negotiations with Russia, market access was partly regained in 2013 and it was again possible to export some of the products (Bertelsmann Stiftung 2018, p. 39).

Today's challenges for Georgian agriculture

Until today, agriculture in Georgia has been characterized by small-scale production on fragmented plots, as well as by low productivity and low income caused by the equitable

[6] The graph depicts the number of dairy cows and other cattle separately due to the different ways of keeping and feeding them. However, depicting both types of cattle together would show that after the mid 1990s the total number of cattle throughout Georgia has been higher than the number of sheep and goats.

distribution of land in the course of the land reforms (Didebulidze and Urushadze 2009, p. 252, p. 255; Lerman 2005, p. 1, p. 4; Ministry of Agriculture of Georgia 2017, p. 20). According to the agricultural census in 2014, 73.1% of landowners own land of only up to 1 ha, while 25% own 1 to 5 ha and a small percentage (1.5%) owns more than 5 ha (Ministry of Agriculture of Georgia 2017, p. 20). In addition, the fact that plots were often also divided into two or three separate parts makes cultivation even more difficult and less effective (Ministry of Agriculture of Georgia 2017, p. 20; Didebulidze and Urushadze 2009, p. 254). Contributing to the inefficiencies, the land registration process is still not finalized, which leads to insecurities with regard to land ownership and hinders entrepreneurial or commercial activities. In addition, the lack of clear land titles leads to the mismanagement and overgrazing of pastures, causing problems with regard to the productivity of animals (Ministry of Agriculture of Georgia 2015, p. 16).

Individual entrepreneurship was not common during the time of the Soviet Union, and the mentality of the rural population might also have an influence on the progress in agriculture (Didebulidze and Urushadze 2009, p. 254 f.); this may also include a lack of willingness to professionally develop products with a higher added value (Ministry of Agriculture of Georgia 2017, p. 48). Today, almost 40% of the added value generated by food processing derives from food processing at households in an informal way (Ministry of Agriculture of Georgia 2017, p. 19).

As described by Didebulidze and Urushadze (2009, p. 257), “Most rural households are trapped at the minimum subsistence level, eking out a meager livelihood but unable to generate a surplus to invest in rebuilding their assets”. This lack of commercialization is also indicated by the low percentage (7.8%) of income derived from sales of agricultural products (Ministry of Agriculture of Georgia 2017, p. 21). In addition, agriculture is still characterized by barter, meaning that “[…] goods and services are paid for with agricultural products” (Didebulidze and Urushadze 2009, p. 258). This also impedes capitalization, which would be necessary for investment. Furthermore, migration leads to a decrease in the potential workforce for the agricultural sector, which also impedes further development (Ministry of Agriculture of Georgia 2015, p. 17, p. 48).

Currently, more than 40% of the active population are working in agriculture, but 97% of them are self-employed due to a lack of employment opportunities (Ministry of Agriculture of Georgia 2017, p. 19). For this reason, one of the aims of the Ministry of Agriculture of Georgia is to diversify the rural economy through the development of off-farm jobs and agritourism (Ministry of Agriculture of Georgia 2015, p. 17).

Since modern agricultural equipment is decisive for efficient agricultural production, the outdated machinery as well as the lack of access to adequate financial resources are other challenges that Georgian agri-food producers face (Ministry of Agriculture of Georgia 2017, p. 20; Didebulidze and Urushadze 2009, p. 256). In addition, the lack of storage facilities is particularly challenging in rural areas (Ministry of Agriculture of Georgia 2017, p. 21).

Georgia has a rich biodiversity that provides ecosystem services, e.g. in the form of water resources or food supply. However, due to pollution, bad waste management, and the destruction of wild plants, the biodiversity is under threat (Ministry of Agriculture of Georgia

2017, p. 41; Bertelsmann Stiftung 2018, p. 25). In addition, natural hazards such as the mudflows or landslides that occur in Georgia harm the development of agriculture (Ministry of Agriculture of Georgia 2015, p. 17). Inappropriate land use practices and technologies also have a negative effect on the fertility of the soil (Ministry of Agriculture of Georgia 2015, p. 16). The natural pastures that characterize Georgian mountainous regions are also of a high value for biodiversity. However, the above-mentioned inadequate pasture management and overgrazing has led to the degradation of these sources of biodiversity (Ministry of Agriculture of Georgia 2017, p. 42).

The infrastructure required to gain access to agricultural lands or rural villages is also in poor condition (Ministry of Agriculture of Georgia 2017, p. 25). Since agriculture is the main source of income in most rural and mountainous Georgian regions (Ministry of Agriculture of Georgia 2017, p. 11), the negative effects and challenges are even stronger there.

Today, Georgia is a member of the WTO and has several trade agreements with other countries, e.g. a free trade agreement with Turkey (Ministry of Agriculture of Georgia 2015, p. 19). As part of the Association Agreement with the EU, in 2014 Georgia also signed a Deep and Comprehensive Free Trade Agreement (DCFTA). In 2016 negotiations on a free trade area with the European Free Trade Association (EFTA) were concluded (Ministry of Agriculture of Georgia 2017, p. 14). These agreements not only provide good opportunities for the export of Georgian agricultural products, but they also set a framework for Georgia to adapt to European standards e.g. with regard to food safety (Ministry of Agriculture of Georgia 2017, p. 22).

Georgia mainly exports hazelnuts, wine, spirits and mineral water, while wheat, sugar, vegetables and fruits, among others, are often imported (Ministry of Agriculture of Georgia 2017, p. 21). While wine, hazelnuts, fruits and vegetables are mainly exported to the EU and CIS countries today, cattle and small ruminants are mainly exported to countries south of Georgia, such as Azerbaijan and Lebanon (Ministry of Agriculture of Georgia 2017, p. 14). However, as a result of the low output of Georgian agriculture, imports are much higher than exports of primary agriculture and agri-food products.

Governmental strategies and support measures

In order to support the development of the rural regions, in 2017 the Ministry of Agriculture of Georgia has published the **Rural Development Strategy of Georgia 2017-2020** (Ministry of Agriculture of Georgia 2017). This strategy not only focuses on the agricultural sector of rural areas, but also provides a broader framework for the multi-sectoral development of rural areas. In order to contribute to the sustainable development of Georgian rural regions, the strategy is guided by three priorities (Ministry of Agriculture of Georgia 2017, p. 53):

1. Economy and competitiveness

2. Social conditions and living standards

3. The environmental protection and sustainable management of natural resources

In particular, priority area 1 encompasses three objectives that are relevant to this study. One objective is the modernization of agriculture and the development of supply chains. In line with the multi-sectoral approach of the strategy, the second objective is the diversification of economic activities and the promotion of non-agricultural activities on the individual level. Contributing to this on a societal level, the third objective is to develop rural tourism based on the specific endowments of a certain region (Ministry of Agriculture of Georgia 2017, p. 53).

The **Strategy for Agricultural Development in Georgia 2015-2020** (Ministry of Agriculture of Georgia 2015) was put into practice in 2015. With a clear focus on the agricultural sector, it contains seven strategic objectives, ranging from enhanced competitiveness to climate-smart agriculture (Ministry of Agriculture of Georgia 2015, p. 20, p. 36). Among other things, the Ministry of Agriculture aims at improving the knowledge of agricultural producers through consultancy and extensions services (Ministry of Agriculture of Georgia 2015, p. 20). It also aims at improving land use and access to finance (Ministry of Agriculture of Georgia 2015, p. 21), as well as access to modern machinery (Ministry of Agriculture of Georgia 2015, p. 30). In addition, it supports cooperation (Ministry of Agriculture of Georgia 2015, p. 22).

What is important with regard to this study is the aim to implement programs for promotion and marketing of national agri-food in particular (Ministry of Agriculture of Georgia 2015, p. 23). On the one hand the aim is to substitute imports of products that can also be produced in Georgia; on the other hand the aim is to increase exports of Georgian agri-food products. A further aim is to develop value chains in rural areas tailored to the respective regions or territorial units. This also includes the development of processing facilities or agritourism (Ministry of Agriculture of Georgia 2015, p. 17, p. 26). The development of agritourism and other off-farm activities will also lead to a diversification of income, since according to the Ministry of Agriculture of Georgia, not all inhabitants of rural areas can work in agriculture and obtain sufficient income from that (Ministry of Agriculture of Georgia 2015, p. 26). This strategic objective is closely linked to the multi-sectoral objectives of the Rural Development Strategy of Georgia 2017-2020 (Ministry of Agriculture of Georgia 2017). Another strategic objective, in particular with regard to marketing agri-food products, is the strengthening of post-harvest services, including the establishment of storage and processing facilities (Ministry of Agriculture of Georgia 2015, p. 29). Furthermore, the strategy includes the support of "Protection of Geographic Indications" (Ministry of Agriculture of Georgia 2015, p. 27), which already exists for certain Georgian cheeses and Chacha for example.[7] Another objective linked to the current study is the development of a food system that is in line with European standards (Ministry of Agriculture of Georgia 2015, p. 31). This is particularly relevant with regard to the implementation of the DCFTA Agreement (Ministry of Agriculture of Georgia 2015, p. 32). In addition, the development of organic agricultural production and certification will be supported (Ministry of Agriculture of Georgia 2017, p. 35).

The Government of Georgia also supports the development of rural infrastructure (Ministry of Agriculture of Georgia 2017, p. 33), as well as the creation of agricultural enterprises and access to agro-credit (Ministry of Agriculture of Georgia 2017, p. 30). Moreover, cooperation is fostered in various agricultural fields, e.g. in apiculture and dairy production (Ministry of Agriculture of Georgia 2017, p. 31), and supported through the Agricultural Cooperative

[7] Chacha is a Georgian pomace brandy.

Development Agency (ACDA), which was established in 2013 (Ministry of Agriculture of Georgia 2017, p. 30), as well as the Law of Georgia on Agriculture Cooperatives (Ministry of Agriculture of Georgia 2015, p. 22).

In addition, the State Programme on Land Registration (as well as an accompanying law) which entered into force in 2016 facilitates the process of land registration and efficient land management and contributes to the development of agriculture (Ministry of Agriculture of Georgia 2017, p. 20, p. 48). Since individual entrepreneurship was suppressed during the time of the Soviet Union, today various programs to support entrepreneurial individual activities are in place, e.g. implemented through the Entrepreneurship Development Agency established in 2014 by the Ministry of Economic and Sustainable Development (Ministry of Agriculture of Georgia 2017, p. 32). To support the least developed mountain regions, in 2015 Georgia also put into force the Law on the Development of Mountain Regions, which provides privileges to residents and entrepreneurs in these areas, e.g. in the form of tax reductions (Ministry of Agriculture of Georgia 2015, p. 12).

2.3 Georgia's Tourism Sector

Development of the sector

Tourism in Georgia already emerged in the 14th century based on the natural endowments of the country, which were considered to be supportive for health (Khomeriki 2015, p. 180). According to Erkomaishvili et al. (2014, p. 171), in 1988 around 4.5 to 5 million tourists (which is almost the same as today) visited Georgia and its sanatoriums.

However, in the following years tourism not only suffered from the breakdown of the Soviet Union but also from the war with Russia in 2008. While in previous years high annual growth rates were recorded, in 2008 the numbers dropped considerably (Erkomaishvili et al. 2014, p. 172). In 2012, Georgia began actively promoting itself internationally as a tourism destination, and since then tourism has been steadily increasing (Erkomaishvili et al. 2014, p. 172 f.). While in 2012 the number of international arrivals was 4,428,221 (Georgian National Tourism Administration 2016, p. 5), a number of 7,902,509 international visitors arrived in 2017.[8] Out of this, 62.8% were tourists (4.1 million), and 37.2% (2.4 million) were single day visits, with the majority of tourists arriving in summer (Georgian National Tourism Administration 2018b, p. 4; Georgian National Tourism Administration 2017, p. 2). The dynamic growth of the sector is also reflected by the total output of the tourism industry, which from 2006 to 2015 increased

[8] In line with the Georgian National Tourism Administration, the following definition of visitors is applied: "An international visitor is a traveler taking a trip to a main destination outside his/her usual environment, for less than a year, for any purpose (business, leisure or other personal purpose) other than to be employed by a resident entirely in the country or place visited. The usual environment of an individual, a key concept in tourism, is defined as the geographical area within which an individual conducts his/her regular life routines. For defining the usual environment in Georgia, travelers conducting eight or more trips are excluded from the data. A visitor (domestic, inbound or outbound) is classified as a tourist (or overnight visitor) if his/her trip includes an overnight stay, or as a same-day visitor (or excursionist) otherwise" (Georgian National Tourism Administration 2018b, p. 4).

2.5 times to an amount of 3507.1 million GEL, and contributed to 6.7% of GDP (Ministry of Agriculture of Georgia 2017, p. 22).

Most of the international visitors are from Azerbaijan, Armenia, Russia and Turkey. Due to new direct flights, the number of tourists from Iran has also increased. The number of visitors from the EU increased considerably (around 23.5 %) from 2016 to 2017 to 283,312 trips (Georgian National Tourism Administration 2018b, p. 4, p. 8).

The most visited destinations for international visitors who are on holiday were Batumi (58.5%), Tbilisi (57.7%), Mtskheta (14.1%) and Kazbegi (13.6%) (Georgian National Tourism Administration 2018b, p. 14). Domestic visitors with the purpose of holidays, leisure or recreation mostly travel to the Mtskheta-Mtianeti region (22%), where Kazbegi is also located, followed by Ajara (18.9%) and Samtskhe-Javakheti (12.4%) (Georgian National Tourism Administration 2018b, p. 19).

Spending of tourists

Although the number of international tourists has increased significantly, only barely 30% of spending is by foreign visitors, while the spending of domestic travelers contributed more than 70% to the tourism GDP in Georgia in 2016 (Georgian National Tourism Administration 2018a, p. 1). This is due to the fact that the number of 12.6 million domestic visits in 2017 is still considerably higher than the number of visits by international travelers (Georgian National Tourism Administration 2018a, p. 1). Nevertheless, the amount of foreign exchange income from foreign tourism increased by 27% since 2016 to 2.75 billion USD in 2017 (Georgian National Tourism Administration 2018b, p. 20).

A popular activity of most visitors is sampling Georgian cuisine and wine. While for domestic visitors this was the third most popular activity in 2017, for international visitors who are on holidays in Georgia this is the most popular activity (Georgian National Tourism Administration 2018b, 17, 13). This is also reflected by a share of expenditure for served food and drinks of approximately 25% for both domestic and international travelers (25.6% of total expenses for international visitors, and 24.6% in the case of domestic visitors) (Georgian National Tourism Administration 2018b, p. 11; Georgian National Tourism Administration 2018a, p. 6).

Type of tourism

Georgia is a country with rich biodiversity and beautiful diversified landscapes, ranging from wetlands, to forests, mountains and dry steppes (Khomeriki 2015, p. 180; Khardzeishvili 2009, p. 513). In addition, it has unique cultural tourist attractions and natural monuments to offer (Ministry of Agriculture of Georgia 2017, p. 23). Due to these features, Georgia might have a high potential for ecotourism: “The country has all three components of the ecological tourism potential: nature diversity, variety of historical and cultural heritage and ethnographical diversity” (Khomeriki 2015, p. 183). Indeed, during recent years this type of tourism has been growing in Georgia. For instance, the number of tourists who visited protected areas in Georgia increased 34 times from approximately 12,000 in 2008 to 417,000 in 2014 (Khomeriki 2015,

p. 180 f.). Visitors who are interested in this type of tourism are mostly people up to the age of 35 years (Khomeriki 2015, p. 182).

The attractive natural environment and dominance of agriculture in rural areas of Georgia furthermore provides a basis for the development of agritourism, which is also supported by the Georgian government, e.g. through trainings on agritourism (Ministry of Agriculture of Georgia 2017, p. 23). Besides this, for sustainable tourism development, raising of awareness on ecological issues as well as improving service skills and infrastructure are also seen to be necessary (Ministry of Agriculture of Georgia 2017, p. 23).

Along with agritourism, the demand for Georgian biological agri-food products might also grow, which could further contribute to socio-economic development in Georgia's rural mountain regions by stimulating production (Erkomaishvili et al. 2014, p. 173). Nevertheless, though the tourism sector is growing and there seem to be potentials to tap, one of the biggest threats of the sector's development is the political instability, in particular reflected by the ongoing conflicts with Russia (Erkomaishvili et al. 2014, p. 171; Bertelsmann Stiftung 2018, p. 28).

2.4 Geographical and Socio-Economic Situation of the Study Region Kazbegi

The study region Kazbegi has been selected within the framework of the AMIES II project. It is located in the administrative region Mtskheta-Mtianeti in the Central Greater Caucasus and, as shown by the map below, borders with Russia in the north.

Figure 4: Map of Georgia and the study region

Source: Adjusted version of the map of Deutsche Forstservice GmbH and AGEG Consultants eG 2010b, p. 3.

"Kazbegi region" is the expression used for this study and in the framework of the AMIES project as well as in informal language. However, the official administrative area is the Kazbegi Municipality, which consists of the communities Stepantsminda (including the settlement Stepantsminda, which is also known as Kazbegi), Goristsikhe, Gudauri, Kobi, Sioni and Sno and their respective villages. In this study, the area of interest includes all communities except Gudauri,[9] and can be considered the "Kazbegi region" in the following.[10]

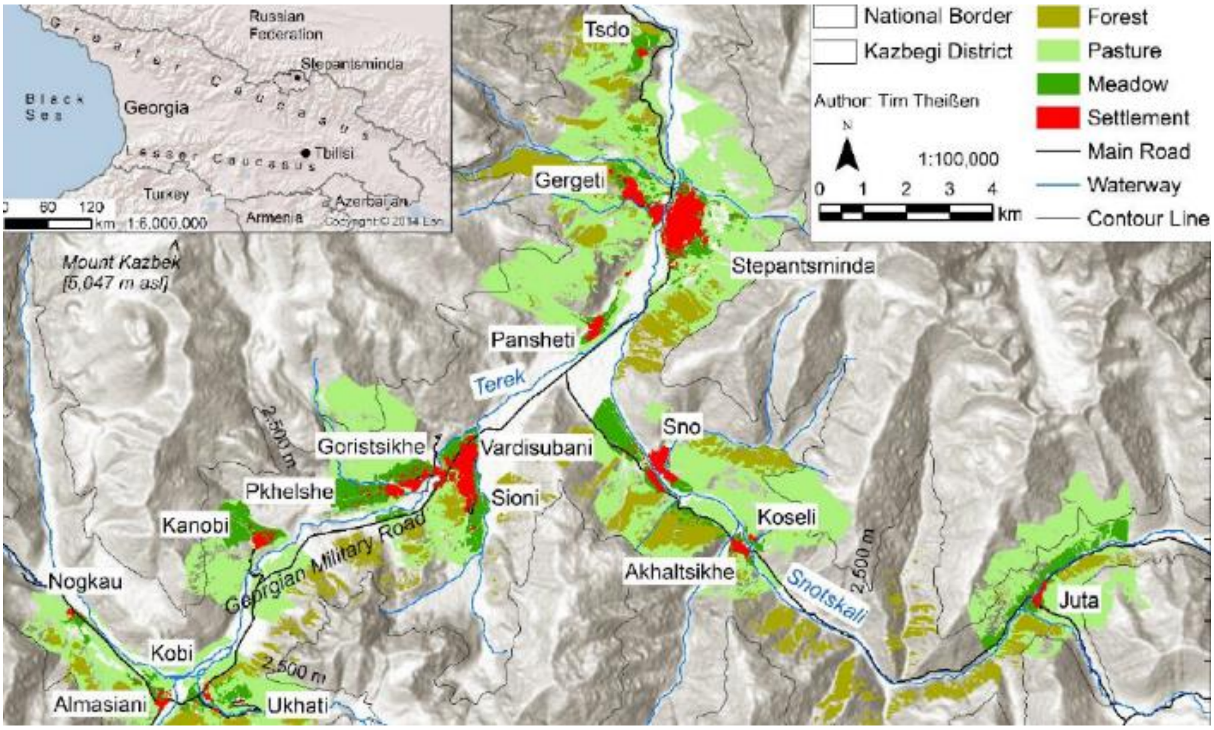


Figure 5: Map of the study region

Source: Theissen et al. 2019, p. 312.

According to the General Population Census of 2014, the Kazbegi region (as defined above) has 3,706[11] inhabitants (National Statistics Office of Georgia (Geostat) 2016, p. 5). Out of this, approximately one third live in the main town of Stepantsminda, which is located at 1,700 m a.s.l. (Heiny 2018, p. 16). From Stepantsminda it is approximately 12 km to the Larsi checkpoint of the Russian border and 150 km to Tbilisi. Kazbegi is a mountainous region ranging from 1,200 to 5,033 m a.s.l. with a harsh climate and an average coverage of snow from November to May (Magiera et al. 2016, p. 306; Akhalkatsi et al. 2006, p. 483). The Georgian

[9] A reason for excluding Gudauri is that no one from this area has been interviewed for this study. This is also due to the fact that Gudauri is in another position to the rest of the Kazbegi Municipality, as winter tourism is popular there.
[10] In various cases only the expression "the region" is used, which also stands for the above-defined Kazbegi region.
[11] This is the number of inhabitants of the Kazbegi Municipality without the 89 inhabitants of the community of Gudauri.

Military Highway which connects Georgia and Russia was partly renewed in 2013 (Heiny 2018, p. 18). However, the general situation of infrastructure in the Kazbegi region is not satisfactory, in particular with regard to the small roads that lead to less populated villages. The landscape is shaped by Mount Kazbek (5,047 m a.s.l.) in the west and the river Terek, which divides the region into east and west. The valley close to the river is characterized by herb-rich hay meadows, the slopes are stony pastures, and the higher areas are either characterized by grasslands or rock vegetation (Magiera et al. 2016, p. 306).

In order to protect ecosystems, conserve biodiversity and contribute to the development of ecotourism and the promotion of natural and cultural heritages, National Parks have been established in Georgia since 1973 (Agency of Protected Areas 2014b). In 1976 the Kazbegi National Park was founded, which mainly covers areas of pasture and rocks (Agency of Protected Areas 2014a). It is fragmented, with a lower part located at 1,400 m a.s.l. and an upper part going up to 4,100 m a.s.l. (Toloraia 2012b, p. 12).

In the course of the qualitative study, the author together with the Georgian project partner visited the villages listed in the table, which have the following population numbers according to the National Statistics Office of Georgia (Geostat) (2016)[12]:

Table 1: Population of the research villages

Community	Village	Population
Stepantsminda	Stepantsminda and Gergeti	1,326
	Tsdo	17
Goristsikhe	Goristsikhe	187
	Pkhelshe	167
	Kanobi	86
Kobi	Kobi	Smaller than 10
Sioni	Sioni	325
	Arsha	440
Sno	Sno	263
	Achkhoti	167
	Akhaltsikhe	35
	Juta	26

Source: National Statistics Office of Georgia (Geostat), 2016.

[12] The official data provided by the Census is disaggregated only to the level of municipalities. However, the Georgian project partner could provide also data disaggregated to the village level which he requested from the National Statistics Office of Georgia.

Of the villages of the Kazbegi region, only approximately half are permanently populated (GeoWel Research 2016, p. 2). This is a result of seasonal migration on the one hand, since a lot of families from the region have additional apartments in Tbilisi and live there during winter. On the other hand, outmigration is caused by the lack of employment opportunities in the region. The dominating sectors in the Kazbegi region are tourism and agriculture. According to GeoWel Research (2015a, p. 7), agriculture is one of the sources of income for 92.8% of households, welfare or pensions for 50.3%, while only 38.6% of households derive income from wage employment and 13.7% from business. Many households rely only on one source of income, which in more than 70% of the cases is agriculture (GeoWel Research 2015a, p. 6). Most of the people are self-employed in agriculture. This high share of self-employment also contributes to the fact that around 57% of the population consider themselves to be unemployed (GeoWel Research 2016, p. 4). Others work as border guards or teachers; the largest employers in the region are schools, kindergartens and emergency services, the Rooms Hotel (see also chapter 2.5), a hydro-electric power station as well as the border police (GeoWel Research 2016, p. 4). Contributing to migration, the situation of education and vocation institutions in the regions is unsatisfactory, and distances to schools from some villages are quite long (GeoWel Research 2016, p. 5). This also leads to families with children or younger people leaving the region (GeoWel Research 2016, p. 3). The community of Kobi is most severely affected by migration. However, in this case, the fact that a large proportion of the population used to be ethnic Ossetians has also contributed to the migration (GeoWel Research 2016, p. 9).

The entire Kazbegi region is characterized by a core-periphery structure. Huge differences are particularly visible with regard to income: While the average monthly household income in Stepantsminda (together with Gergeti) was 436 GEL in 2011[13] according to a survey conducted by Heiny (2018), the average household income in the surrounding villages was only 237 GEL (Heiny 2018, p. 65).[14] In addition, infrastructure and medical services are less developed in the villages, and almost all economic or administrative activities or services can only be found in Stepantsminda (GeoWel Research 2016, p. 8). Besides road infrastructure, which is more outdated the farther away one travels from Stepantsminda, there are fewer shops in the villages and telecommunication and internet access is also restricted (GeoWel Research 2016, p. 5). For example in Juta, which is located at more than 2,000 m a.s.l. there is neither internet connection nor a reliable mobile phone connection (GeoWel Research 2016, p. 18). Furthermore, there are no grocery shops in Juta. Although the situation of communication providers and shops is better in Stepantsminda, there is also no supermarket and food stuffs and other products are only offered in small general stores; in addition, small fruit and vegetable shops and stands and a butcher do exist. Most of the villages have also a places where bread is baked in a Georgian oven (known as a tone) (GeoWel Research 2016, p. 14). The education level also reflects the

[13] Unfortunately, no newer data on village level could be found.

[14] In the year of the survey (2011), the average monthly cash income (including transfers) for rural households all over Georgia was 408.6 Gel, in 2017: 677.3 GEL (1056 GEL in urban areas) (Source: National Statistics Office of Georgia (Geostat) 2019).

core-periphery structure: In Stepantsminda 50% of adults have a higher education, while this figure is only 40% in the villages (GeoWel Research 2015a, p. 4).

The Law on the Development of Mountainous Regions, which was put into practice in 2015 (see above chapter 2.1), applies to all people who live in the Kazbegi region. It includes for example tax reductions, partly free provision of water and electricity, and an increase in the wages of doctors in the region (Local Action Group Kazbegi 2016, p. 14). In particular, the tax reduction contributes to the support of individual entrepreneurial development in the Kazbegi region (GeoWel Research 2016, p. 13).

Currently, several projects support the development of the Kazbegi region. One of these is the **European Neighbourhood Programme for Agriculture and Rural Development (ENPARD)**, which is guided by the Strategy of Agricultural Development in Georgia 2015-2020 (Ministry of Agriculture of Georgia 2015; see chapter 2.2). The main aims of ENPARD are to support agriculture and rural development to improve livelihoods. This is achieved by strengthening cooperation and access to resources, as well as the promotion of diversified and socio-economic opportunities for rural inhabitants, including the support of non-agricultural activities such as tourism (ENPARD Georgia 2018). In the Kazbegi region, ENPARD is implemented through the Local Action Group (LAG) Kazbegi, which applies the LEADER approach to the Kazbegi region (Local Action Group Kazbegi 2018; Local Action Group Kazbegi 2016). LEADER stands for “Liaison Entre Actions de Développement de l'Économie Rurale”, and is an approach of the European Union to support rural development (see also chapter 3.2.1). Based on several studies, the LAG Kazbegi developed a strategy for the development of the Kazbegi region which includes economic, social and environmental topics, as well as management, culture and education related issues. On a regional level, branding of the Kazbegi region by using the Mount Kazbek as a symbol for the region is one of the strategic aims (Local Action Group Kazbegi 2016, p. 11). On the individual level, a focus is on increasing the productivity and income of farmers and on diversifying sources of income, including non-agricultural activities (Local Action Group Kazbegi 2016, p. 23). Thus, ENPARD and LEADER in the Kazbegi region provide socio-economic strategies that focus on the multi-sectoral development of the whole region, as well as measures to support individual pluralistic economic activities to diversify income.

In previous years, similar targets were pursued by the USAID New Economic Opportunities Initiative (NEO) (New Economic Opportunities Initiative 2011), which was also implemented in the Kazbegi region. For example studies conducted within the framework of this development initiative shed light on the dairy value chain of the Kazbegi region as well as on the tourism sector (Toloraia 2012a, 2012b).

2.5 Agriculture and Tourism in the Kazbegi Region

Agriculture during the Soviet era and in transition

During Soviet times, animal husbandry was the most important economic activity in the region. In particular, sheep keeping to produce milk, wool and meat was popular (Heiny 2018, p. 19). Besides sheep, large numbers of cattle were also kept. During summer time pasture areas in the Kazbegi region were used to feed the animals, while during winter time animals grazed on pastures in the Kazlavi region, which today is located in Russia. The availability of these pastures on current Russian territory led to an extreme number of 400,000 sheep, which were also grazing in the Kazbegi region during summer time. These high numbers of animals negatively affected the pastures and increased risks of erosion. However, in 1965 an extremely harsh winter led to a decrease in sheep numbers to around 300,000, which continued to be the approximate number of animals until 1991. (Deutsche Forstservice GmbH and AGEG Consultants eG 2010b, p. 27 f.). Besides animal husbandry, in former times cereals like barley and wheat were probably also cultivated in the region; an indicator for this are the ancient lynchets, which facilitate cultivation at steep slopes, which have been found in Juta (Heiny 2018, p.19 f.).

Furthermore, until approximately the year 2005, growing vegetables was an important agricultural activity in the Kazbegi region. A reason for this was that until that time, the Kazbegi region received free gas from Russia through the Transcaucasian gas pipelines. Vegetable greenhouses could be warmed with this gas free of charge for the inhabitants of the region. (GeoWel Research 2016, p. 18; Deutsche Forstservice GmbH and AGEG Consultants eG 2010a, p. 49 f.). Most of the approximately 500 greenhouses in the region were located close to the Military Highway. Various different vegetables were grown in the greenhouses, but the major crop was cucumbers, which were not only sold in the Kazbegi region but also in North Ossetia. (Deutsche Forstservice GmbH and AGEG Consultants eG 2010a, p. 50; Deutsche Forstservice GmbH and AGEG Consultants eG 2010b, p. 24). The existence of a market in Russia for vegetables thus also contributed to the income of the local population. In general, the Military Highway had a positive impact on the economic situation in the Kazbegi region, as it provided access to the Russian market and thus contributed to the income generation of the inhabitants of the Kazbegi region (Deutsche Forstservice GmbH and AGEG Consultants eG 2010a, p. 50).

With the independence of Georgia from the Soviet Union, serious changes have also occurred in the Kazbegi region. Firstly, the number of sheep in the region has decreased considerably to around 19,000 in 2015 (see figure 6 below). A reason for this decrease was the economic crisis following the independence of Georgia, as well as the loss of winter pastures on former Russian territories due to the secessionist conflicts with Russia. These conflicts and the establishment of boundaries in the following time led to the sale and slaughter of an enormous number of animals (Deutsche Forstservice GmbH and AGEG Consultants eG 2010b, p. 22, p. 28).

Besides sheep numbers, the number of cattle has also decreased considerably during recent years. While in 2004 more than 4,000 head of cattle were kept in the region (Gugushvili et al. 2017, p. 54, based on data requested by the authors from the National Statistics office of Georgia), in 2015 only around 2,800 head of cattle still live in the region, out of which around

80% are dairy cows (data from the Ministry of Agriculture District Information and Consultancy Service, requested by the Georgian project partner; see also graph below). In addition to sheep and cattle, a lower number of pigs and poultry are kept, mainly for own consumption (GeoWel Research 2015a, p. 6). Furthermore, according to the Ministry of Agriculture District Information and Consultancy Service, there are around 1,000 bee-families in the region.

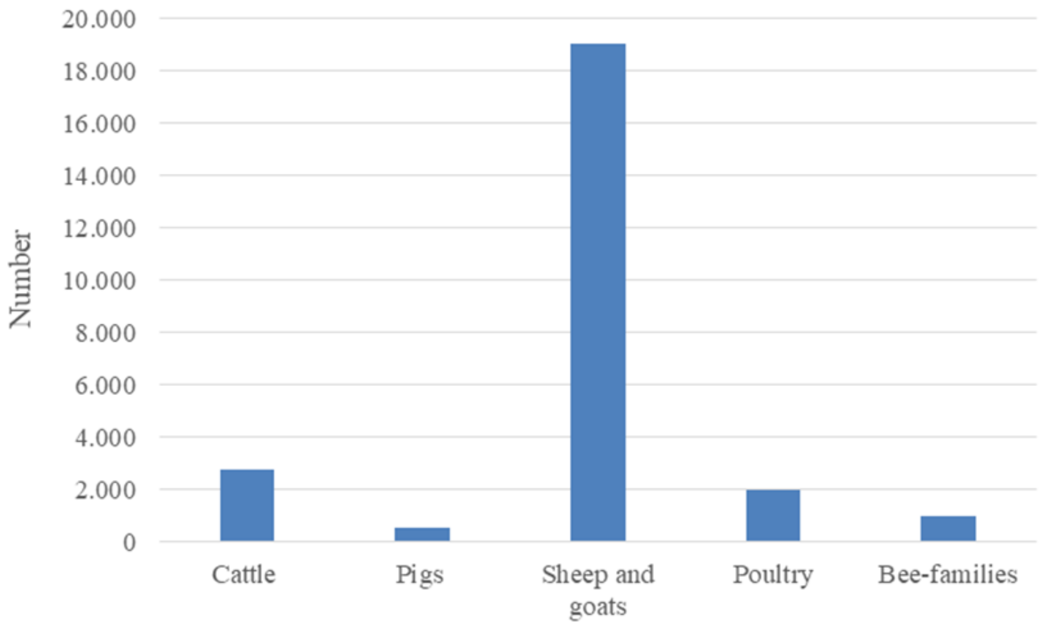


Figure 6: Livestock in the Kazbegi region

Source: Own depiction, based on data of the year 2015 on the Kazbegi region from the Ministry of Agriculture District Information and Consultancy Service, requested by the Georgian project partner. Note: Numbers do not include livestock in Gudauri, only the communities Stepantsminda, Sno, Sioni, Goristsikhe and Kobi are represented.

Despite the strong decrease in animal numbers, until today animal husbandry is one of the most important agricultural activities in the region, with around 80% of the population being involved in this activity. On average, one to five head of cattle are kept per household in order to produce meat, milk, and dairy products (Heiny 2018, p. 137 f.). However, due to the loss of winter pastures, animals are brought to lower Georgian regions during winter time (Heiny 2018, p. 19).

The end of the free provision of gas from Russia in 2005 also resulted in a decrease in the number of greenhouses in the Kazbegi region (GeoWel Research 2016, p. 18; Heiny 2018, p. 19; Deutsche Forstservice GmbH and AGEG Consultants eG 2010b, p. 24). The destruction of the greenhouse infrastructure was also supported by the provision of compensation to the owners of the greenhouses by the Georgian government (Deutsche Forstservice GmbH and AGEG Consultants eG 2010a, p. 49 f.). Besides the abandonment of the greenhouses and the accompanying decrease in vegetable growing for commercial purposes, the market for vegetables in North Ossetia also disappeared with the closing of the border to Russia. Today, some trading via dealers takes place (Deutsche Forstservice GmbH and AGEG Consultants eG 2010a, p. 50).

Land reforms which were carried out in Georgia after the declaration of independence also still have an effect on agricultural production in the Kazbegi region today. As is the case all over Georgia, the land reforms have led to small average plot sizes. According to Gugushvili et al. (2017, p. 49, based on data of the Agricultural Census of Georgia 2014, requested from the National Statistics office of Georgia by the authors), the average plot size of a household in the Kazbegi region is 0.53 ha. Besides the fact that small land plots impede economies of scale and commercialization of the agricultural sector, the land reforms also still lead to uncertainties with regard to land use. Since the registration and issuance of land titles is not satisfactorily finalized yet, in the Kazbegi region people also still do not know which plots of land they can use and what belongs to whom; thus conflicts about land ownership are still prevalent and can lead to considerable tensions (GeoWel Research 2016, p. 18).

On the small plots, often in the form of household gardens, mainly potatoes and vegetables for own consumption are grown (GeoWel Research 2016, p. 14; Heiny 2018, p. 20, p. 137; Gugushvili et al. 2017, p. 51). Only in rare cases is produce sold (Heiny 2018, p. 19). According to a survey conducted by Heiny (2018), 80% produce for their own consumption, and only 8 to 9% sell part of their output (Heiny 2018, p. 137). Thus, agriculture in the Kazbegi region is mainly characterized by low commercialization implemented through small-scale agri-food producers.[15]

In cases where agri-food products are sold, they are often sold directly at the houses of the producers (70%) to their neighbors, followed by sales in Stepantsminda and a small share of sales in Tbilisi or other Georgian regions. The products are offered in the above-mentioned general stores, or through fruit and vegetable shops and stands. Some of the agri-food products are also imported and offered for sale by traders who drive around in the region and sell from their cars (Gugushvili et al. 2017, p. 52). Some producers also sell part of their production to local hotels or guesthouses (GeoWel Research 2015a, p. 10).

In addition to the small plots, agricultural production in the region is hampered by a lack of access to finance and a lack of knowledge of production and marketing, as well as a lack of processing facilities such as dairies or slaughterhouses (GeoWel Research 2015a, p. 11; Heiny 2018, p. 19). Furthermore, there is no provider for agricultural input in the region (GeoWel Research 2016, p. 4). These factors not only impede the general development of the agricultural

[15] Various terms exist, e.g. smallholder or subsistence farmer. However, as people not are necessarily owners of a holding (or a farm), and do not necessarily produce only for their own consumption (pure subsistence farming), the researcher considers the term small-scale agri-food producer to be adequate, as it reflects the small size of the production but at the same time does not exclude that a certain share of the produce is sold. It is furthermore in line with the definition of the term "small-scale producer" used by the OECD, though with a focus on agriculture: "Small-scale producers are producers operating at a small scale, used to distinguish from industrialized producers. The line separating small- and large- scale producers is arbitrary. What is considered small-scale in one country or region may be considered large-scale in another" (OECD 2001b).

sector in the Kazbegi region, but also hamper the marketing of regional agri-food products to hotels and guesthouses in the region (GeoWel Research 2015a, p. 10).

Tourism development in the Kazbegi region

Already during Soviet times the Kazbegi region was characterized not only by agriculture but also by tourism. Some big Soviet hotels were located there, and the Kazbegi region was already a famous destination for mountain tourism and exploring nature (Heiny 2018, p. 20). Though tourism has existed in the Kazbegi region for a long time, the sector has long been underdeveloped due to poor conditions of roads leading to and within the region, among other factors (GeoWel Research 2015b, p. 2). Nevertheless, since around 2010 tourism has been on the rise (GeoWel Research 2016, p. 10).

While in 2007 approximately 20,000 visitors came to the Kazbegi region, this number increased to 91,047 in 2014; of these, 54,036 visitors were international tourists (Gugushvili et al. 2017, p. 51; based on data from Geostat that was requested by the authors and is not available online). According to a report on tourism produced by the Local Action Group (LAG) of the Kazbegi region, in 2015 there was one big hotel (the Rooms Hotel), three medium-sized hotels, and around 60 guesthouses in Stepantsminda, Gergeti and Arsha, with most of them being located in Stepantsminda. With 156 rooms, the Rooms Hotel in Stepantsminda is the largest hotel in the region (GeoWel Research 2016, p. 13 f.). It targets mainly high-income earners and offers various services and activities such as hiking tours, horseback riding, quad bike tours, snowshoeing and even helicopter flights (MoreSleep 2018a, 2018b).[16]

Thielen (2018, p. 34) was able to gather more up to date data for Stepantsminda by summing up the number of accommodations in the Kazbegi region based on a search on the website of the travel e-commerce company Booking.com. This shows that between 2015 and 2018 alone the number of accommodations has increased tremendously. Thielen (2018) found that in total there are 173 accommodations, out of which 30 classify themselves as hotels, 120 as guesthouses and 16 were other types of accommodation (e.g. apartments or a camp site). In 2018, the Kazbegi National Park attracted 174,520 visitors, which is an increase of around 13% compared with the previous year (Agency of Protected Areas 2014c). As there is even a plan to construct an airport in the Kazbegi region (Charkviani 2016; Thielen 2018, p. 44), these numbers might even increase further.

Although a general diametric trend can be observed where inhabitants migrate from the region while tourist numbers increase, some people who have left the region come back during summer time to offer accommodations and services to tourists (GeoWel Research 2015b, p. 9 f.). Thus, while agriculture has declined, tourism has experienced a strong growth during recent years. However, not all villages profit from the developments in tourism yet. While in Stepantsminda and Gergeti tourism is prevalent, most other villages of the region are still predominantly shaped by agriculture in the form of small-scale production (GeoWel Research 2016, p. 8), which contributes to the above-mentioned core-periphery structure. According to Heiny (2018,

[16] For more detailed information on the Rooms Hotel see chapter 4.2.3.

p. 152), when comparing Stepantsminda and the villages of the Kazbegi region, in Stepantsminda the households have fewer animals and potatoes, but are stronger in tourism than in agriculture and incomes are higher; in contrast to this, the villages are dominated by agriculture, have more animals and potatoes, but also have lower incomes due to self-employment in agriculture. While in the Kazbegi villages 73% of the households are not involved in tourism at all, in Stepantsminda only 48% of the households are not active in the tourism sector (Heiny 2018, p. 138).

Besides Stepantsminda and Gergeti, tourism also benefits the village Juta (GeoWel Research 2016, p. 14), which is located at more than 2,000 m a.s.l. and offers beautiful mountains and untouched nature. Although road conditions are bad and it takes a drive of around 20 minutes to drive there from the main road in the valley, during summer time it is one of the most visited places in the Kazbegi region (GeoWel Research 2016, p. 9). In 2015 there were three family-based hotels, and ten households where tourists could stay in Juta (GeoWel Research 2015b, p. 20 f.). In addition, the Zeta Camp is located in Juta, which is a camp site and guesthouse in the mountains located a bit higher than the village.[17] In general in the Kazbegi region, besides the low number of expensive hotels, there is a large number of family-based accommodations offered but a lack of mid-range hotels (Local Action Group Kazbegi 2016, p. 15).

Types of tourists and tourism in the Kazbegi region

Most of the tourists who visit the Kazbegi region are from Russia, Poland and Israel. In addition, people from Czech Republic, Germany and France often visit the region. Many Georgians also visit the region, though often only for one day without spending the night there (GeoWel Research 2015b, p. 10). In general, many tourists go to the Kazbegi region only for a day trip, since the region is only 2.5 hours by car from Tbilisi (GeoWel Research 2015b, p. 2). The majority of tourists are between 26 and 35 years old (41 %), followed by up to 25 years olds (24%) and 36 to 50 years old people (22%). Only a negligibly low number of tourists are over 50 years old (GeoWel Research 2015b, p. 11).

Tourists visit the region for various reasons, e.g. nature, mountains, adventures and cultural heritages (GeoWel Research 2015b, 10 f.; Mamniashvili 2018, p. 189). The main tourist attractions of the Kazbegi region are trekking, hiking, climbing, rafting, ski tours, off-road driving, bicycle tours, horse riding, paragliding, and bird watching. Furthermore, visiting the Kazbegi National Park and cultural sites as well as experiencing the regional cuisine and hospitality are reasons for travelling to the region (GeoWel Research 2015b, p. 19; Toloraia 2012b, p. 12). Due to the long winters and since ski tourism is not developed in the studied part of the Kazbegi region,[18] many people visit this area between spring and autumn (Toloraia 2012b, p. 12; Mamniashvili 2018, p. 17). However, a new cable car between the village Kobi

[17] For more detailed information on the Zeta Camp see chapter 4.2.3.

[18] Ski tourism is developed in Gudauri, but as pointed out in chapter 2.4, this community of the Kazbegi Municipality is not the focus of the current study.

and the winter tourism center Gudauri might also lead to an increase in winter tourism in the Kazbegi region (Gudauri Travel 2018; Thielen 2018).

The most visited tourist sites in Kazbegi are – in this order – the Gergeti Sameba Trinity Church, which is a monastery in Gergeti with a spectacular view on Stepantsminda, the Gveleti waterfalls, Mount Kazbek and the glacier, Sno valley, Juta, the Alexandre Kazbegi museum and Trusso valley (GeoWel Research 2015b, p. 14). The interest in the nature of the Kazbegi region is also reflected by the number of tourists who visit the Kazbegi National Park. While the total number of tourists who visited Protected Areas in Georgia has grown significantly (from 12,200 in 2008 to 417,800 in 2014), in 2014 the Kazbegi National Park had the second highest number of visitors after the Prometheus cave in the Imereti region (Khomeriki 2015, p. 183).

Since the Kazbegi region is endowed with beautiful nature and most tourists go there for “ecological and adventure experiences” (Toloraia 2012b, p. 12), one opportunity for the region could be to establish adventure or ecotourism there in order to contribute to the proper management of natural resources and to increase the income of the local population (Khardzeishvili 2009, p. 521; Toloraia 2012b, p. 6). Due to the interest of visitors in the cultural sites and monuments of the region, the implementation of cultural tourism could also be an option (Toloraia 2012b, p. 6). In summary, tourism in the Kazbegi region is characterized by relatively young travelers and their interest in adventure, nature, cultural sites and local food, the availability of small-scale family-based guesthouses and the aim to implement sustainable tourism which does not harm but protects the environment (Local Action Group Kazbegi 2016, p. 9f.). Due to these features, in line with the characteristics mentioned by Brohman (1996, p. 65; see chapter 3.2.2 below), tourism in the Kazbegi region could potentially be termed “alternative tourism“.

Challenges in tourism

The main problems associated with tourism in the Kazbegi region are bad road conditions, the driving styles of local taxi drivers, and a general lack of information on the region and its tourist attractions. Further hurdles are the lack of foreign language and service skills of guesthouse owners, and the furnishings of the guesthouses (GeoWel Research 2015b, p. 22).

Furthermore, it must be noted that a large share of the tourism services offered in the Kazbegi region are of an informal nature. For example, out of the approximately 60 guesthouses in the region in 2015, a study implemented by People in Need (PIN)[19] found only 12 guesthouses that were officially registered (GeoWel Research 2015b, p. 21). In addition, it is likely that also other tourist services offered (e.g. guided tours or taxi services) can be considered under informal activities. According to GeoWel Research (2015b, p. 21) the reason for not registering the guesthouses is to avoid tax payments.

With regard to food provision for tourists, not many cafés and restaurants exist in the region. In 2012, there were seven small restaurants and cafés in the region (Toloraia 2012b, p. 16); a

[19] For more detailed information on PIN see chapter 4.2.3.

number which has most likely increased during recent years. One restaurant is located in Arsha and it is known for having the best Khinkali[20] in the region (GeoWel Research 2016, p. 14). However, in general, tourists still do not seem to be happy with the food offered in the Kazbegi region, as shown by the studies of PIN (GeoWel Research 2015b) and Gugushvili et al. (2017).

According to the study by PIN, tourists have the feeling that restaurants in the Kazbegi region are overpriced (GeoWel Research 2015b, p. 20). In addition, tourists complained that there was not a great variety of dishes offered, and some of them stated that they miss vegetarian options and lettuce (GeoWel Research 2015b, p. 22). A study by Gugushvili et al. also revealed that tourists would like to have more *local* dishes on the menus (Gugushvili et al. 2017, p. 51). According to GeoWel Research (2015b, p. 20) this might generally be possible, since Kazbegi is famous for its local dishes. According to the study by PIN, tourists also pointed out that they like the high quality of the local food. Gugushvili et al. (2017, p. 51) also found that tourists associate products from the Kazbegi region with organic and environmentally friendly production (Gugushvili et al. 2017, p. 51). Since there are only a few options for going out for a meal in the Kazbegi region, most guesthouses in the region offer not only breakfast but also lunch and dinner to their guests if they wish; however, they normally only offer a small selection of food (Local Action Group Kazbegi 2016, p. 15). Besides an adequate number and type of restaurants, according to Toloraia (2012b, p. 16 f.) a souvenir shop for tourists is also lacking in the region.

Framework conditions and support of agriculture and tourism in the Kazbegi region

To summarize, the Kazbegi region is characterized by a change of framework conditions for agricultural production, which has led to a decline in agriculture. One of the changes has been the loss of the market in Russia, thus impeding income generation of the local inhabitants and indicating need for finding new ways to generate income. In turn, though not developing equally in all villages, the tourism sector in the region has grown significantly throughout the last years. One the one hand, this might lead to people leaving agriculture to work in the tourism sector; however, at the same time the growing tourism sector might provide a market for regional agri-food products, since there seems to be a potential demand for such products and dishes (Local Action Group Kazbegi 2016, p. 21 f.; Heiny 2018, p. 159).

Agriculture and tourism in the Kazbegi region are also supported within the framework of the ENPARD program and the Kazbegi Development Strategy 2016-2020 (Local Action Group Kazbegi 2016, p. 23 ff.). Besides the general aim to improve the quality of life of the inhabitants of the Kazbegi region, the specific aims are to increase agricultural productivity and to develop tourism services. On an individual level, the aim is to diversify sources of income, including income from agricultural activities as well as income from non-agricultural activities such as tourism.

The following table summarizes the main priorities of the Kazbegi Development Strategy 2016-2020 in the fields of agriculture and tourism (Local Action Group Kazbegi 2016, p. 23 ff.):

[20] Khinkali are a Georgian type of dumpling filled for example with meat, cheese or potatoes.

Table 2: Priorities of the Kazbegi Development Strategy

	Agriculture	Tourism
Aims/ planned results	▪ Increase income from agriculture as well as productivity in traditional agricultural activities (e.g. potato growing) ▪ Improve quality of agricultural products and market access ▪ Inform about and implement eco/bio agricultural practices (like organic fertilization)	▪ Improve services in tourism ▪ Make villages of the region benefit from tourism ▪ Engage the regional youth in tourism ▪ Support the cooperation of agricultural producers and tourism service providers ▪ Develop innovative products and services
Potential measures	▪ Implement new equipment (like e.g. irrigation systems) ▪ Support the implementation of food safety standards ▪ Establish cooperatives ▪ Support the diversification of agricultural products ▪ Support the establishment of startups and new agricultural types of production such as pig or poultry keeping ▪ Support organic production and branding ▪ Support agricultural production in line with environmental protection	▪ Support of the development of overnight tourism and food provision in remote villages ▪ Capacity building for tourism service providers ▪ Support in income diversification (e.g. through agritourism) ▪ Support cooperation in agriculture and tourism ▪ Support the regional production of products needed in tourism which are currently imported (import substitution) ▪ Support development of tourism products such as souvenirs ▪ Develop tourism infrastructure ▪ Support the development of extreme and rehabilitation tourism ▪ Implement culinary and craft events, festivals

Source: Own compilation based on Local Action Group Kazbegi 2016, p. 23 ff.

Certain measures also refer to supporting linkages of agriculture and tourism, for example import substitution of the agri-food products needed in tourism. However, so far the strategy does not include an explicit focus on examining the potential linkages of agriculture and tourism in detail. Other aims are to counteract migration or to contribute to the development of education, or capacity building in environmental protection as well as the promotion of the Kazbegi region’s cultural heritage, also in relation to tourism.

3 Conceptual Background, Literature Review and Research Objective

Chapter 3 covers the conceptual background of the study. This includes a description of the theory of cultural lag of William Fielding Ogburn, which forms the overall theoretical framework of this study, and an overview of rural development theories and strategies. Furthermore, linkages between agriculture and tourism and the accompanying effects are outlined based on a literature review. Finally, the research gap and the research questions are presented.

3.1 The Theory of Cultural Lag according to William F. Ogburn

Basic features of the theory of cultural lag

The theory of cultural lag according to William Fielding Ogburn, which was first outlined in his essay "The Hypothesis of Cultural Lag" in 1922 (Ogburn 1922; p. 200 ff.), has been applied to various studies. For instance, Skiba and Marshall (2011) apply the theory to technological advancements with regard to pharmaceuticals, Yoshida (2010) applies it to marriage rates and changed gender views in Japan, Erskine et al. (2015) apply it to the dairy sector and the increased need for training of unskilled workers, and Podoba (2003) uses the theory of cultural lag to explain processes of transformation in Slovakia. Although various other examples could be listed, according to the knowledge of the author of this study no other application similar to the background of this study currently exists.

For the current research, the theory of cultural lag is used to provide a basic theoretical framework. Hence, in this study the aim is not to test the theory or prove any hypotheses based on the theory of the cultural lag as in other studies, but to apply the theory of cultural lag as a framework for argumentation, since it seems to provide an adequate theoretical, intellectual construct for analyzing the Kazbegi region and putting the study into a superordinate framework (see also chapter 3.3).

In 1922, Ogburn first developed the thesis "[…] that various parts of modern culture are not changing at the same rate, some parts are changing much more rapidly than others; and since there is a correlation and interdependence of parts, a rapid change in one part of our culture requires readjustments through other changes in the various correlated parts of culture" (Ogburn 1922, p. 200 f.). He illustrates his thesis with several examples. One vivid example is the case of a forest which has initially been used to satisfy the needs of the population in the form of firewood and wood for building houses, among other things. However, in the course of the time the forest was exploited. Thus, it was realized that the policy of cutting timber had to be readjusted to a policy of conservation in order to be harmoniously adjusted to the changed conditions of the almost destroyed forest so that the future needs of the population could be met (Ogburn 1922, p. 203 ff.).

When Ogburn took up the idea of cultural lag in later essays (e.g. Ogburn 1964), he slightly adjusted the wording. The terms applied in these essays will also be applied in the following. In the essays Ogburn defines a cultural lag as follows: "A cultural lag occurs when one of two parts of culture which are correlated changes before or in a greater degree than the other part does, thereby causing less adjustment between the two parts than existed previously" (Ogburn 1964, p. 86).

While in most of the cases, technology (or, as described by Ogburn in 1922, the "material condition") is seen as a driver for changes which require the adjustments of non-material elements such as customs or beliefs (Ogburn 1922, p. 202), it is also possible to apply the theory in reverse (e.g. Evan 2004). This is also pointed out in more detail by Ogburn (1964, p. 91), who stated that "A cultural lag is independent of the nature of the initiating part or the lagging part provided that they are interconnected. The independent variable may be technological, economic, political, ideological or anything else. But when the unequal time or degree of change produces a strain on the interconnected parts or is expressed differently when the correlation is lessened, then it is called a cultural lag" (Ogburn 1964, p. 91).

When applying the theory of cultural lag, four steps must be followed:

1) The independent and the dependent variable must be identified
2) It must be shown that the two variables are adjusted to each other
3) It must be determined that at a certain point in time one of the variables has changed more than the other, or that one has changed while the other has not changed
4) It must be shown that after the changes the adjustment of the two variables is less satisfactory than before the changes (all steps according to Ogburn 1964, p. 89)

Although Ogburn admits that people can live with many degrees of the adjustment, he emphasizes that efforts for better adjustments may lead to more satisfactory lives, with the following example: "Society can exist without unemployment insurance, but unemployment insurance may be a much better social condition" (Ogburn 1922, p. 267 f.). Against this background and with the aim to improve livelihoods in the Kazbegi region, the theory of cultural lag is applied as a superordinate framework.

Application of the theory of cultural lag to the Kazbegi region

When taking a look at the Kazbegi region, it is assumed that the changed framework conditions for agricultural production can be considered the independent variable, while the income generating behavior of agri-food producers can be considered the dependent variable. It is supposed that in former times these two variables were adjusted to one another due to the following reasons (pointed out in more detail in chapter 2.5): During Soviet times and until 2005, gas was provided free of charge to the population of the Kazbegi region, which enabled the inhabitants to establish greenhouses and produce vegetables. Furthermore, the political situation allowed the producers to sell their output to the Russian market, which thus contributed to the generation of income. In addition, when the political situation with Russia was stable, pastures on Russian territory could be used for livestock, which in turn could be used as a source of income.

Several changes in the independent variable (the framework conditions for agricultural production) occurred in the course of the transition, with a peak in the middle of the first decade of this century: Conflicts led to a loss of pastures on Russian territory, thus leading to lower numbers of livestock which could be used as a source of income. The loss of free gas in 2005 resulted in the demolition of greenhouses. Furthermore, due to an embargo by Russia the market for produce was no longer available, and through the land reforms after independence, small plots and a high share of subsistence farming are now prevalent.

The tourism sector potentially offers a market for regional agri-food products. Hence, its growth in the Kazbegi region might lead to a stimulation of agricultural production in the region.[21] For this reason it is assumed that the growth in the tourism sector in the Kazbegi region can also be considered to be a framework condition for agricultural production. Furthermore, the general transition to a market-based economy allows for individual entrepreneurial actions, which might also influence the decisions of agricultural producers.

However, although some small adjustments have taken place (for example some of the producers already try to market their products to regional guesthouses), so far the general income generating behavior of the agri-food producers in the Kazbegi region has not yet adapted to the new framework conditions in agricultural production and is still lagging behind. This is reflected by a very low commercialization of agriculture and low income generation, as well as migration from the region. This situation might also be an indicator that the planned results of the Kazbegi Development Strategy (Local Action Group Kazbegi 2016) have not yet been achieved. Rauch et al. (2001, p. 22) describe such a situation as a crisis: “Possible failure of rural development in a situation of changing requirements would mean crisis: social crisis, impoverishment, food crisis, or environmental crisis”.

In order to overcome the maladjustments or the crisis situation and to improve the livelihoods of the local producers, the aim is to find ways to adjust the income generating behavior of local agri-food producers to the changed framework conditions. Following Behrendt’s description (Behrendt 1969; Schulz 1997, p. 16) that change can be influenced and fostered systematically, it is assumed that the acceleration of the adjustment process can be achieved through government or development strategies, or incentives which influence individual decisions.

Since tourists seem to like products from the region, this might provide an opportunity for agri-food producers to market their products to the tourism sector. Within a wider framework of development, such a strategy might not only contribute to an increase in income and improvement of the livelihoods of agri-food producers, but could also potentially contribute to a more sustainable regional economic development by including more than one sector.

3.2 Rural Development and Aspects of Linking Agriculture and Tourism

3.2.1 Approaches of Rural Development

According to Kraus et al. (2014, p. 167), rural development “embraces a lot of different areas of activity such as the production of high quality and local products, nature conservation, and landscape management, agro-tourism and short supply chains”. Rural development approaches thus cover a broad range of activities. As shown in this chapter, approaches to rural

[21] For more information on this “trickle down effect” see chapter 3.2.2.

development have changed considerably during recent years. From the 1950s to the 1970s, rural development policy was focused on state intervention and on sectors, e.g. in the form of providing subsidies for agriculture (OECD 2006a, p. 3). Furthermore, in particular in the 1960s to 70s[22], rural development in Soviet countries was guided by the idea of economies of scale in large-scale agriculture, while in other non-socialist countries a change to supporting small-scale agriculture occurred in the mid 1960s (Ellis and Biggs 2001, p. 440).

The 1980s led to a change in favor of a liberal free market system (OECD 2016, p. 68; Margarian 2013, p. 3), since experience had shown that "[…] simply channeling money to rural areas is not enough to address their problems and help them to develop" (OECD 2006a, p. 4). These changes were supported by neoclassical theory and structural adjustments, based on the idea that heavy state intervention hinders development (OECD 2016, p. 68). In the mid 1980s, endogenous growth theory – putting the focus on investment in technologies, human capital and knowledge – emerged and guided bottom-up development policy actions (OECD 2016, p. 69). Within this framework, "endogenous" also implied focusing on territories instead of sectors, to evaluate and exploit local resources, and to "[…] focus on the needs, capacities and perspectives of local people" (Ray 2000, p. 166; Margarian 2013, p. 3). Various development approaches were developed against the background of endogenous growth theory. Examples include the local economic development approach as well as the community based development approach (OECD 2016, p. 69). Furthermore, at that time rapid rural appraisal, which was refined to include participatory rural appraisal, emerged (Ellis and Biggs 2001, p. 443). As indicated by the name, a common characteristic of the rural development approaches of the 1980s and 1990s was the focus on participation of the local population in the elaboration of development strategies (e.g. OECD 2016, p. 69; Rauch 2009, p. 73; Ellis and Biggs 2001, p. 443).

During these years "ownership" became important, meaning that the target groups themselves should be responsible for development concepts concerning them (Rauch 2009, p. 70). In line with that, in 1983 the German GIZ developed the so-called "Regional Rural Development" (Rauch 2009, p. 70). As described by Rauch et al. (2001, p. 1) "RRD [Regional Rural Development; comment of the author] is a concept for rural development interventions in a given region. Both regional and multi-sectoral, it focuses on people and poverty". However, despite the multi-sectoral intention of the abovementioned endogenous approaches, a strong focus of rural development was still only on agriculture (Margarian 2013, p. 9).

In the 1990s the sustainable livelihoods approach described by Chambers (Chambers 1984) started to be implemented within the framework of rural development (OECD 2016, p. 70; Ellis and Biggs 2001, p. 444). With a livelihood comprising "[…] the capabilities, assets and activities required for a means of living" (Ashley and Carney 1999, p. 54), this approach also put the focus on people, rather than on resources (Ashley and Carney 1999, p. 54). As defined

[22] The following time specification provides a basic idea of the time frame when a certain theory or approach emerged. However, in the words of Ellis and Biggs 2001, p. 438: "[…] predominant or popular rural development ideas are not trapped in time capsules conveniently organized in decades. Ideas that first appear in one decade often gain strength in the following decade, and only begin to affect rural development practice in a widespread way ten or fifteen years after they were first put forward".

by Chambers and Conway (1991, p. 6) with regard to sustainability "A livelihood is sustainable when it can cope with and recover from stresses and shocks and maintain or enhance its capabilities and assets both now and in the future, while not undermining the natural resource base". The ability to cope with shocks is also based on strategies of diversification, such as the diversification of households' or individuals' working activities and sources of income (Chambers and Conway 1991, p. 11). Furthermore, the approach recognized the key role of social capital in rural development (OECD 2016, p. 70).

In the 2000s, the guiding criteria for development strategies became more complex, since the aim was to target various topics at the same time: Besides socio-economic issues, environmental topics and poverty reduction were also included (OECD 2016, p. 72; Ellis and Biggs 2001, p. 444). The rural development approaches were mainly influenced by changes through "[…] globalization, improved communications and reduced transportation costs, changing trade patterns for commodities, and the emergence of important non-farm activities in rural regions" (OECD 2006b, p. 12).

From the year 2000 on, development approaches were guided by the Millennium Development Goals (OECD 2016, p. 73; United Nations 2015, p. 3). However, several approaches which had already been implemented in former times were and are still only implemented in adjusted versions and not developed from scratch (OECD 2016, p. 73). One example is the approach of Regional Rural Development of the 1990s which came back in 2012 through the territorial development approach, which also covers the LEADER approach (Wörner 2014, p. 18; see more detailed description below).

Based on the Millennium Development Goals, in 2015 the 17 Sustainable Development Goals were developed in order to complete the achievements of the Millennium Development Goals (United Nations 2015a). In line with their name, they cover economic, social and environmental topics of development.[23] With regard to rural development, goals 1, 2, 8 and 12 in particular seem to be relevant (United Nations 2015a, p. 14):

- Goal 1: End poverty in all its forms everywhere
- Goal 2: End hunger, achieve food security and improved nutrition and promote sustainable agriculture
- Goal 8: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all
- Goal 12: Ensure sustainable consumption and production patterns

[23] For a detailed list of the goals and targets see for example United Nations 2015a, p. 14 ff.

In line with the development goals and the new complexity and changes that rural development had to cope with, in 2006 the OCED developed the New Rural Development Paradigm,[24] which is characterized by two principles:

1) places instead of sectors;
2) investments instead of subsidies (OECD 2006b, p. 56).

The first principle derives from the above-mentioned situation that rural development still often focuses primarily on agriculture despite the diversity of rural areas and the need to also focus on rural non-farm activities (Margarian 2013, p. 10). This need for a multi-sectoral paradigm was interestingly already described by Ellis and Biggs (2001, p. 445) in 2001: "If a new paradigm of rural development is to emerge, it will be one in which agriculture takes its place along with a host of other actual and potential rural and nonrural activities that are important to the construction of viable rural livelihoods […] in this sense that the cross-sectoral and multi-occupational diversity of rural livelihoods may need to become the cornerstone of rural development policy […]". In line with the endogenous theories, the focus is on the identification and valorization of resources available within a certain territory (OECD 2006b, p. 57), which provides the basis for rural development approaches tailored to the specific context of an area. The second principle aims at replacing subsidies (which were previously popular for supporting agriculture) with investments, e.g. in infrastructure or communications technologies. In 2016, the rural development paradigm of the OECD has been adjusted to suit developing countries (OECD 2016).[25] Due to the above-described reasons it still has a multi-sectoral focus, but the principle is also that it is not only focusing on rural development but on rural-urban linkages (OECD 2016, p. 31). In addition to that, the New Rural Development Paradigm is based on multi-agent key actors, aiming at bringing together stakeholders both from the public and private sectors as well as from the local and national level (OECD 2016, p. 31).

In total, the New Rural Development Paradigm for developing countries contains eight components (OECD 2016, p. 33):

- Governance
- Multiple sectors
- Infrastructure
- Urban-rural linkages
- Inclusiveness
- Gender

[24] The OCED defines a paradigm as "[…] a philosophical or theoretical framework for how something should be done or thought about. Paradigms provide a 'lens' through which a particular subject should be viewed or analyzed, based on a set of normative judgments and assumptions and in relation to pre-defined goals" (OECD 2016, p. 230).
[25] According to the Development Assistance Committee (DAC) of the OECD, Georgia is part of the "Lower Middle Income Countries and Territories" (DAC List of ODA Recipients Effective for reporting on 2018, 2019 and 2020 flows; source: OECD 2019). Thus, although it is not part of the Least Developed Countries, Georgia receives Official Development Assistance (ODA). In particular in some rural areas of Georgia, the income level and living standards are well below those of developed countries.

- Demography
- Sustainability

Policy actions with regard to the multi-sectoral approach may include integration of agriculture in value chains, promotion of access to finance and markets, as well as strengthening of rural tourism, among others (OECD 2016, p. 32). On an individual or household level, the promotion of non-farm activities and income generation in service sectors is included in order to diversify risks. One successfully implemented approach of endogenous rural development which can be subsumed under the new rural development paradigm is the LEADER approach (OECD 2006b, p. 90), whose basic characteristics are outlined in the following paragraphs.

According to the European Commission (2006, p. 5) LEADER is denoted as "an innovative approach" for rural development in the EU. The abbreviation stands for the French term "Liaison entre actions de développement rural" which already indicates the main objective of the approach: to link actions of rural development (European Commission 2006, p. 5). LEADER is seen as an approach to find innovative responses to changes or challenges in rural regions. Its main objective is to improve the livelihoods of people living in rural areas by applying a holistic concept which focuses on the creation of employment opportunities (e.g. through the production and marketing of food) as well as on environmental or social conditions. (European Commission 2006, p. 5).

LEADER started in 1991 as an experimental program. Prior to that time, as pointed out above, most of the rural development projects had a top-down and sectoral approach and focused solely on farmers. With LEADER a new approach came into existence, which was area-based and focusing on all actors and sectors of rural regions. The approach is characterized by seven key features, which are all interrelated and should not be considered separately. (European Commission 2006, p. 6). The following description of the features of the LEADER approach is mainly based on a guide of the European Commission (2006, p. 8 ff.).

1) Area-based local development strategies: This features means that a "small, homogenous, socially cohesive territory, often characterized by common traditions, a local identity, a sense of belonging or common needs and expectations" (European Commission 2006, p. 8) is chosen for the application of the LEADER approach. This has the advantage that strengths and weaknesses can be more easily identified than in a larger or more general setting, and it allows the development of actions tailored to the real local conditions.

2) Bottom-up approach: The aim of the bottom-up approach is to include local stakeholders in the decision-making process of the local development strategy, as well as to define priorities with their help. However, the approach does not work against official authorities (who stand for a top-down approach) but aims at achieving an interaction of both politicians and the local population. Such a participatory approach may be implemented through joint workshops or focus group discussions with local stakeholders, or can also include awareness raising and capacity building in order to be in exchange with the target group. (European Commission 2006, p. 8).

3) Public-private partnerships: The local action groups (LAG): Within the framework of the LEADER approach, local action groups (LAG) are set up. These groups are composed of private actors, civil society and public authorities (Volk and Bojnec 2014, p. 364) and they should represent the local economic sectors. It is their responsibility to develop a local strategy and to allocate the received funds similarly to a development agency (Lopolito et al. 2015, p. 57 referring to Romeo and Marcianò 2014).

The specific tasks may include the implementation of multi-sectoral actions, strengthening of cooperation of rural stakeholders, and, on a more general level, the support of "[…] the process of adaptation and change in the agricultural sector (for example quality products, food chains), the integration of environmental concerns, the diversification of the rural economy and quality of life" (European Commission 2006, p. 10). As pointed out above, within the framework of ENPARD a LAG has also been established in the Kazbegi region with the aim to implement the LEADER approach in the region.

4) Facilitating innovation: Innovation in the framework of the LEADER approach is not narrowly defined. Among others, it may include the development of new products or new strategies, as well as the adaptation of innovations to the region in focus, which have been developed elsewhere. According to Dargan and Shucksmith (2008, p. 274), innovation in the sense of the LEADER approach primarily encompasses measures to improve the rural area concerned as well as measures to support the development of local linkages.

5) Integrated and multi-sectoral actions: In contrast to several former development approaches which focused only on one sector, LEADER is a multi-sectoral approach which aims at targeting and linking several economic sectors at the same time. Linking agriculture and tourism can be considered such a multi-sectoral approach. Integration refers to linking all actors who are involved in an action or concept of development.

6) Networking: Networking serves as a means for the exchange of best-practice and lessons learnt. It encompasses institutional networks as well as national, regional and local networks. While the former are funded by the European Commission and are established as larger scale platforms, including policy makers and other actors involved in rural development (not only in the framework of the LEADER program), the latter are less formal and aim at fostering the exchange between local, regional or national actors of the LEADER program.

7) Cooperation: Cooperation goes beyond cooperation within one LEADER-region but means cooperation with other regions or even nations which apply a similar development approach. Cooperation in the sense of LEADER does not mean only an exchange of experience, but the cooperation partners need to work jointly on a specific project with a precise objective (e.g. a joint marketing strategy for food, if they produce the same agri-food products).

A positive example of the LEADER approach in line with the new rural development paradigm is the "Cheese Route" in Bregenzerwald in Austria (OECD 2006b, p. 73). In this region, local traditional cheese can be bought along a certain route in dairies or at the farm gate, but besides that, a whole network has developed around the local cheese. It is offered in local hotels and restaurants and the "Cheese Route" is a brand for the whole region (KäseStrasse 2018). While in the beginning LEADER has only been implemented in Europe, it is now also implemented in third countries, e.g. in Azerbaijan and also in Georgia (Deutsche Gesellschaft für

Internationale Zusammenarbeit (GIZ) 2012, p. 8). Though the LEADER approach has been also implemented with success in various regions outside of Western Europe, as noted by Volk and Bojnec (2014, p. 374), creating awareness among the local population on the characteristics and objectives of the LEADER approach is essential for a successful outcome.

3.2.2 Linking Agriculture and Tourism

Central aspects of the relationship of agriculture and tourism

One way of contributing to rural development in the sense of the LEADER approach might be by linking agriculture and tourism. This assumption is mainly based on the idea that tourism could have positive **trickle down effects** on other economic sectors, or to put it in the words of Torres and Momsen (2004, p. 298): "Tourism has the potential to stimulate local agricultural development through backward linkages that allow local farmers to supply tourism industry food needs". Backward linkages, as described by Anderson (2018, p. 171), in contrast to forward linkages, "[…] are demand-oriented, measuring the relative importance of a sector as a consumer of input from other sectors".

Tourists' **expenditure on food** constitutes approximately one third of the total tourist expenditure[26] (Bélisle 1983, p. 498; Henderson 2009, p. 321; Meler and Cerovic 2003, p. 177). Hence, the accompanying tourist demand could trigger investment in agriculture (Taylor and Kneafsey 2016, p. 178) and could be one of the incentives for those involved in agri-food to increase their production (Bélisle 1983, p. 500).

This potential is also described by Telfer and Wall (1996, p. 635): "A complementary way to enhance the benefits of tourism is to expand the backward economic linkages by increasing the amount of local food used in tourism industry". Various other authors examined linkages of tourism and agriculture, e.g. Bélisle (1983, 1984a), Dodman and Rhiney (2008), Telfer and Wall (1996), Torres (2003), Torres and Momsen (2004; 2011), Timms (2006), Pillay and Rogerson (2013) and Anderson (2018), among others. As described by Torres and Momsen (2004, p. 302), if farmers manage to tap the potential of new market opportunities and manage to supply the tourism sector, this may not only lead to higher income but also contribute to better livelihoods. Thus, proper linkages of both sectors might thereby even lead to less out-migration (Torres and Momsen 2004, p. 302) and stimulate local economic development (Pillay and Rogerson 2013, p. 50).

This is in line with Renting et al. (2003), who conducted research on **short food supply chains** (SFSC) with a focus on the interaction of "actors who are directly involved in the production, processing, distribution, and consumption of new food products" (Renting et al. 2003, p. 393). SFSC are often but not necessarily characterized by a face-to-face interaction of producers and consumers and provide clear information on the place of production of the food product (Renting et al. 2003, p. 399; Marsden et al. 2000, p. 425). A characteristic example is selling at the farm-gate. Through SFSC, a higher proportion of value added stays with the producers

[26] As described in chapter 2.3, in Georgia this share is slightly lower, with approximately 25 % for both domestic and international travelers.

(Renting et al. 2003; Marsden et al. 2000, p. 436). According to Knaus et al. (2017, p. 121) such an approach of stimulating local economies might particularly suitable for mountainous rural regions with a focus on agriculture. As described by several authors (Torres and Momsen 2004, p. 301; Bowen et al. 1991, p. 46 ; Cox et al. 1995, p. 210; Choenkwan et al. 2016, p. 171), potentials can particularly be tapped by marketing fresh local products and food which is unique in a certain region.

Another positive example of linking tourism and local agriculture was provided by Shah (2000, p. 20 ff.) with regard to a National Park in Nepal at the border to Tibet. While in former times in this region trade with Tibet was the most important source of income, the closure of the border in 1959 led to a loss of income. However, the rising tourism sector contributed to a compensation for this loss. Combining tourism with agricultural activities like dairy and horticulture even led to reverse migration flows (Shah 2000, p. 29). Hence, this is also an example where linking tourism and agriculture has helped to adjust to changes in the local framework conditions. However, the relationship of both sectors is complex (Choenkwan et al. 2016, p. 162) and besides the abovementioned positive aspects, tourism growth is also associated with potential detrimental impacts on the agricultural sector.

One prominent aspect mentioned in the literature is **leakage** (Telfer and Wall 1996, p. 636; Bélisle 1983, p. 499; Brohman 1996, p. 53; Dodman and Rhiney 2008, p. 3). Leakage in the form of foreign exchange losses can be caused through food imports (Telfer and Wall 1996, p. 639), or if foreigners own local tourism sector enterprises (Brohman 1996, p. 54; Lacher and Nepal 2010, p. 80). As pointed out by Telfer and Wall (1996, p. 638): "With greater reliance on imports, there is a reduced opportunity to expand and modernize local food production and processing". Bélisle (1983, p. 498) states even more negatively that imports may lead to a loss in employment and income from the agricultural sector. With regard to the relation of ownership structures and leakages, in contrast to foreign ownership "[…] locally owned enterprises typically reduce leakage […]" (Lacher and Nepal 2010, p. 80). In line with that, tourism with ownership structures characterized by small-scale family businesses are instrumental in reducing leakages (Brohman 1996, p. 64). According to Brohman (1996), linkages of tourism and other sectors could reduce leakages since they "[…] allow the revenue to circulate through the domestic economy, producing larger multiplier effects in terms of both employment and income for the local population" (Brohman 1996, p. 56), which also supports the approach.

As pointed out by several authors, tourism and agriculture might also **compete for resources** (e.g. Bélisle 1983, p. 500; Bowen et al. 1991, p. 45; Lacher and Nepal 2010, p. 83; Brohman 1996, p. 53 ff.; Torres 2003, p. 547; Telfer and Wall 1996, p. 637). Among others, tourism and agriculture might compete for labor and land (Bélisle 1983, p. 500). Through the competition for resources, inputs for agriculture might become more expensive and thus lead to a decrease in agricultural production. Hence, the competition might possibly even contribute to an increase in poverty (Torres and Momsen 2004, p. 299) and migration, both from agriculture to tourism and from the region (Torres and Momsen 2004, p. 301).

However, with regard to migration of the workforce from agriculture to tourism, it must be taken into account that this does not necessarily depend only on rising wages in the tourism sector, but might also be due to a general phenomenon that for younger people working in the agricultural sector is no longer considered to be desirable (Telfer and Wall 1996, p. 637; Hermans 1981, p. 477). In addition, outmigration from agricultural regions might even have started before tourism developed (Bélisle 1983, p. 501). This might be related to the argument of Cox (1979, p. 39). In his studies about rural sociology in the Soviet Union, he relates the level of education and interest in cultural activities to migration intentions. He argues that due to the lower level of cultural offers in smaller rural villages, younger people with a higher educational level would prefer to leave and work in urban areas (Cox 1979, p. 40). Thus, the willingness to work in agriculture might not only depend on agriculture and other sectors in a region, but also on activities offered in a region regardless of the area of employment.

The potential competition for resources of agriculture and tourism might also have an **effect on land use**. Bélisle (1983, p. 501) provided examples of regions where prices for land went up due to tourism real estate development, which in turn led to a decrease in agriculturally used land in these areas. However, even if land is sold, it is not necessarily a loss for the whole agricultural sector. As described by Hermans (1981, p. 477), when agricultural land along the Spanish coast was sold to the tourism sector, the money was reinvested in irrigation systems in agriculture. In addition, as noted by Bowen et al. (1991, p. 45 f.), agricultural landscapes are of aesthetic value for tourists. In the examples provided by Bowen et al. (1991, p. 45 f.), governments compensated farmers to continue with certain "aesthetically desirable" types of production. Such government interventions could also hinder farmers from selling their land to the tourism sector, even if it is located in an attractive tourism area and would thus lead to a high price.

Taking a look at land use leads to considering the effect of tourism on the ecology, and thus on resources for agriculture. Through overuse and unsound environmental practices, tourism (as well as agriculture) can cause negative **effects on the environment** (Brohman 1996, p. 53, p. 58) and thereby affect other livelihood concerns such as the availability of fodder, soil quality or the availability of wild plants for sale and own consumption (Shah 2000, p. 32). However, such damage is often caused by large-scale types of tourism, which according to studies conducted so far, is not (yet) the case in the Kazbegi region, and could be avoided by sustainable alternative forms of tourism (Brohman 1996, p. 58). Moreover, "expanding the share of local food sourcing is acknowledged as assuming the vital added function of promoting sustainable development by reducing the carbon 'foodprint' of tourism resorts or accommodation establishments" (Pillay and Rogerson 2013, p. 50; Gössling et al. 2011, p. 540).

A further effect of tourism might be the **reinforcement of core-periphery structures**, such as those that Brohman (1996, p. 57) observed in the case of plantation economies in the Caribbean. In these cases, tourism contributed to a spatial dichotomy, with some privileged regions being involved in tourism while other regions were not involved at all.[27] However, this effect might also be taken up (and thus possibly deliberately pushed) by village-level strategies (Lacher and Nepal 2010, p. 94), which take into account the uniqueness and strengths of a certain settlement

[27] As described above, the Kazbegi region is already characterized by a core-periphery structure with Stepantsminda and Gergeti being heavily involved in tourism while other villages are only involved in agriculture. This situation therefore must also be taken into account in the future.

(Brohman 1996, p. 65) in order to increase positive economic impacts of tourism and agriculture and distribute the income of a region more evenly.

In general, the effect of tourism on agriculture cannot be considered from a static perspective. An example of this is the case of Fuenterrabia in the Basque country in Spain, where initially agricultural production was stimulated since the tourism sector provided a seasonal market for meat, milk and other farm products, but in the long run, tourism growth had a negative effect on agriculture (Greenwood 1972, p. 80; Hermans 1981, p. 464). One reason for this was that land prices rose drastically in the long-term, which made it difficult for farmers to buy land for agricultural production. Consequently, linking the sectors did not work successfully in the long-run.

Preferences of tourists and type of tourism

When taking a look at the effect of tourism on agriculture, the **preferences of tourists** and their effect on the type of agricultural production must also be considered. As pointed out by Mak et al. (2012, p. 172), these preferences have a strong influence on the food offered in the tourism sector and thus also on the local food produced. For example, as described by Bowen et al. (1991, p. 46) and also investigated by Hermans (1981), based on the example of a Spanish region, linkages of local agriculture and tourism might lead to a decline in the traditional agricultural production of a region, but at the same time stimulate non-traditional agriculture. In the case of Cambril in Spain, for example, farmers decreased the production of traditional cultures such as olives, but instead increased fruit and vegetable growing (Hermans 1981, p. 473).

The potential for linking regional agri-food to tourism might further be strengthened through the demand of tourists for traditional cuisine and special regional dishes and food products (Torres and Momsen 2004; p. 302). Additionally, the demand from tourists for organic food is growing (Torres and Momsen 2004, p. 312), which might also be conducive for linking agriculture and tourism in situations where organic products are available in a region. Furthermore, consuming local food might be one way to satisfy the desire of tourists to have an authentic holiday experience (Dodman and Rhiney 2008, p. 1; Sims 2009, p. 321). Conversely, if tourists are interested in food that reflects the culture of a certain area visited (Anderson 2018, p. 168), marketing the distinctiveness of a certain destination might be supported by referring to typical types of food of the region (Dodman and Rhiney 2008, p. 13).

In this context, it can be summarized that food consumption has a symbolic meaning, since it is a way to get to know other cultures and their food, and at the same time it is an obligatory activity while travelling, since tourists need to eat to obtain nutrients (Mak et al. 2012, p. 171), or in the words of Taylor and Kneafsey (2016, p. 178): “Food is a critical tourism resource in that it provides physical sustenance, offers pleasure and entertainment and serves a social purpose. It is a primary motivator for many travelers, it engenders new tastes and can present insights into other cultures”. Nevertheless, though the mentioned factors support the use of local food, the consumption of local food by tourists can also be affected negatively by the preferences of tourists, for example when people have food neophobia and fear new food (Mak et al. 2012, p. 17; Chang et al. 2011, p. 308).

Going to a higher level, the preferences of tourists often depend on the type of tourist and on the **type of tourism** implemented in a certain region. For example, tourists who are interested in ecotourism or alternative tourism are often also more interested in local experiences (Lacher and Nepal 2010, p. 78 f.), which may also include food. In line with that, local food also seems to be in demand by individual tourists who seek adventures (Torres 2003, p. 548). While various forms of alternative tourism exist, "[…] their stress on small-scale, locally-owned developments, community participation, and cultural and environmental sustainability" (Brohman 1996, p. 65) are typical characteristics. According to Torres and Momsen (2004, p. 312), such tourism structures are suitable for producing and marketing specialized local products.

Ways of linking agriculture and tourism

While different ways of linking agriculture and tourism exist, the focus of this study is on selling agri-food products produced by local agri-food producers to tourism sector representatives or tourists, since linkages via the food chain can provide significant benefits to poor agri-food producers (Mitchell and Ashley 2010, p. 73). In line with Kohls and Uhl (1998, p. 6), food marketing is defined as "[…] the performance of all business activities involved in the flow of food products and services from the point of initial agricultural production until they are in the hands of consumers". According to Schanderl (1993, p. 52 ff.), depending on whether there is a direct contact between the producer and the consumer when the product reaches the consumer, it is possible to differentiate between direct and indirect marketing of products.[28]

Direct and indirect marketing

Selling at the farm gate, selling from cars, producer-consumer cooperatives, shops operated by farmers, and "pick your own" schemes are among the options that Schanderl (1993, p. 54 f.) lists with regard to the **direct marketing** of products. According to Torres and Momsen, in particular selling products at the farm gate might provide opportunities for linkages of small-scale agri-food producers and tourists, since the consumers are brought directly to the product, which provides the producers with an easy access to the market (Torres and Momsen 2004, p. 297).

According to Bowen et al. (1991, p. 45) (who besides using the term direct marketing also uses the terms direct sales or direct provision), this also includes the selling of agricultural products at road side stands or farmer markets, as well as agriculturally-based tourist attractions, which he defines as follows: "An agriculture-based tourist attraction is an enterprise engaged in plant or animal production with an objective of attracting tourists to the site to enjoy its agricultural

[28] In relation to food products the term marketing is used in the sense of the German term "Vermarktung" and not in the sense of the German term "marketing". Schanderl 1993, p. 52 and Kuhnert 1998, p. 5, use the term interchangeably with the term "Absatz". Thus, in line with these authors, at this stage the focus of this study is more on selling and distributing the products than on the planning of marketing and the promotion of the products, which is often associated with the German term "marketing". This is also in line with Renting et al. 2003, who use the terms direct selling and direct sales for the examples provided in the text.

attributes and/or services to consume or purchase agricultural products there" (Bowen et al. 1991, p. 51). The named examples include farm tourism and as well as agriculturally-related events such as tours to production locations, among others (Bowen et al. 1991, p. 51 f.). Festivals celebrating local food (for example of the "Taste of Barbados" festival provided by Torres and Momsen 2011, p. 145) or farm visits for educational purposes (Torres and Momsen 2011, p. 145) could also be subsumed under the category of an agriculturally-based tourist attraction.

Indirect marketing covers situations where products are provided to the consumers indirectly via intermediaries, e.g. via hotels or restaurants that a producer sells his or her products to (Bowen et al. 1991, p. 45), and who then offer the food to tourists. It also includes selling the produce to wholesalers or processing companies who in the following supply the tourism sector. Contract farming is another measure for linking agriculture and tourism, which is usually implemented in the framework of indirect marketing. According to Abbott (1993, p. 370): "Contract farming may be defined as agricultural production carried out according to an agreement between farmers and a buyer which places conditions on the production and marketing of the commodity".

With the example of **food souvenirs** Torres und Momsen (2011, p. 143), show an additional way of marketing food products. According to Lin und Mao (2015, p. 20): "A food specialty has its own meaning associated with one specific culture and location. In other words, a food specialty can be considered a tangible means of capturing the specific nature of a certain region. […] tourists bring back food specialties back home from specific destinations as food souvenirs for themselves or for others". In the case of Barbados, food and beverage souvenirs include for example rum and spices (Torres and Momsen 2011, p. 143), while in Thailand green tea has been successfully marketed as a food souvenir (Lacher and Nepal 2010, p. 93). Food souvenirs can be sold directly via the above-mentioned options of direct provision to tourists, but can also be sold to hotels or even wholesalers, who in the following supply the tourists or tourism service facilities.

Renting et al. (2003, p. 399) depict different ways of distributing agri-food products in their model of **short food supply chains (SFSC)**. They differentiate between three types of SFSC, with only face-to-face SFSC and proximate SFSC being relevant for the current study. The most important factor with regard to SFSC is not the distance between producer and consumer, but the level of embeddedness with information of the product and its origin, for example through a label on the product (Renting et al. 2003, p. 400; Marsden et al. 2000, p. 425). In face-to-face SFSC, consumers and producers interact directly, which in most cases corresponds to the above-mentioned method of direct sales (Renting et al. 2003, p. 400) and includes for example selling at the farm gate. In the case of proximate SFSC, interaction might go beyond direct interaction of producers and consumers and include local shops, restaurants or hotels as middlemen. Thematic routes on food in the region or regional hallmarks could also be subsumed under this category (Renting et al. 2003, p. 399 f.).

While most of the above-mentioned examples of linking agriculture and tourism (e.g. farm stays or selling at the farm gate) can be implemented on the individual or household level, regional hallmarks can only be implemented on a regional level (or at least more than on the individual or household level). An example would be the umbrella brand used in the region Rhön in

Germany, which encompasses regional brands and quality seals which can be used both to promote regional products and to promote the region for tourism purposes (Knickel 2001, p. 131; see also chapter 5.3.1).

Informal structures

In particular, in the case of direct provision of products, informal economic structures can play an important role. According to Michaud (1991) the term informal economy "[…] refers to all the undercover economic activities aimed at alleviating income losses, including the constantly mushrooming traditional as well as not quite legal activities that are not officially recognized" (Michaud 1991, p. 606). Informal activities which might for example include unregistered guesthouses[29] or the selling of souvenirs offer opportunities for poor people, since this market is easy to enter (Timothy and Wall 1997, p. 325; Shah 2000, p. 14, p. 28). Furthermore, although not being official and thus not supported by the government, it has to be taken into account that vendors who unofficially sell products (e.g. at the road side), are often the only direct contact point of local inhabitants and tourists; consequently, they also contribute to the impression tourists get from a certain location (Shah 2000, p. 28).

Hurdles for linkages of agriculture and tourism

Despite the possible potentials of linking agriculture and tourism, various hurdles for tapping such potentials have been identified. The following list has been composed and adjusted based on the findings of Bélisle (1983), Torres (2003), Torres and Momsen (2004) and Lacher and Nepal (2010).

Supply/Production-related hurdles

- Lack of capital or access to financial resources
- Lack of adequate technological equipment
- Lack of knowledge of production techniques
- Lack of advisory services
- Uncertainty of future land ownership
- Poor agricultural growing conditions
- Lack of economies of scale
- Low availability of demanded natural resources
- Lack of possibilities to increase the production
- No willingness to change the traditional type of production

[29] Unregistered guesthouses also exist in the Kazbegi region.

- Lack of information and awareness of the needs and demand of tourists and the tourism sector
- Lack of possibilities to produce sufficient and consistent quality and quantity of the products
- Lack of possibilities to products produced according to food safety standards
- Poor processing facilities, which leads to a lack of high-end products with added value

Demand/Consumption-related hurdles

- Preferences of tourists for familiar food or the taste of food from their home countries
- Preferences for imported food due to locally available quantities, quality and prices
- Fear of illness due to unfamiliar food
- Food safety concerns
- Seasonal variations in demand
- Lack of information on locally available food
- Inexperience of hotel cooks with regard to local food products

Market-related hurdles

- High prices for local products
- Lack of availability of products produced according to food safety standards and in demand by the tourism sector
- Lack of knowledge and inexperience of agri-food producers in marketing
- No possibilities to become educated in marketing
- Lack of marketing infrastructure
- Inadequate transportation infrastructure (including infrastructure to not interrupt the cold chain)
- Lack of storage facilities
- No point of market entry for local producers
- Inability to cooperate due to corruption, monopoly structures, bureaucratic hurdles
- Unreliability of local producers with regard to regular supply or contracts
- Informal structures, inability of local agricultural producers to provide receipts
- Fraud through intermediaries, dictation of prices through intermediaries

Many of the supply related factors, such as access to input factors or land ownership structures, concern the production of agri-food products. A lack of access to these factors may result in production output of low quality or insufficient quantity. However, a large share of the hurdles is also related to a lack of knowledge of the agri-food producers on the products needed by the tourism sector, which is stressed by several authors, e.g. Meyer (2006, p. 31): "[…] there is generally limited awareness of what is required by tourists and what can be produced locally to satisfy the demands of the tourism sector […]". On the demand side, in particular the preferences of tourists can be a hurdle for linking the sectors, as is the need of the tourism sector to use food produced according to food safety standards. Nevertheless, also on the demand side, a lack of knowledge of what is produced locally and what to prepare using locally available agri-food products might be a hurdle.

With regard to marketing local agri-food products to the tourism sector, one hurdle can be the lack of knowledge or the inexperience of local small-scale agri-food producers in marketing. Furthermore, inadequate marketing infrastructure such as a lack of storage facilities may represent an obstacle. In addition, while it may be difficult for agri-food producers to enter the market, e.g. due to bureaucratic hurdles, for representatives of the tourism sector the informality of the agricultural sector may be deterring. Fraud by intermediaries and distrust may also represent a hurdle for linkages.

Governmental support of linkages and risk reduction

In order to enable local agri-food producers to overcome the above-mentioned hurdles and to respond to the needs of the tourism sector, an adequate **entrepreneurial and institutional framework** which is shaped by policy makers is required. In particular, government support in the fields of business environment (e.g. functioning of markets, efficiency of transport) and trade policy are essential for enhancing linkages of the sectors (Mitchell and Ashley 2010, p. 78 f.). Thus, in order to sustainably link agriculture and tourism, the implementation of strategic government actions is requested in order to coordinate the development of the different economic sectors and their mutual influence (Brohman 1996, p. 62). In some countries, development strategies even explicitly mention the need to link tourism and agriculture (Telfer and Wall 1996, p. 636).

In addition, **risk reducing strategies for regional economic development** can be influenced by policy makers. The literature reveals that focusing development actions only on one sector in a region might increase the risk of dependency (Torres and Momsen 2004, p. 298) and uneven economic development of the region (Brohman 1996, p. 50). In particular, the tourism sector is "an industry with fashion and vogues" (Greenwood 1972, p. 88), which may lead to a sudden loss of interest of tourists in a certain area. In addition, the seasonality of the sector (Telfer and Wall 1996, p. 644) must also be taken into account.[30] Furthermore, the political situation in a region[31] might lead to sudden changes with regard to tourism, which makes the dependency on one sector even more risky. Thus, the strategy of fostering both agriculture and tourism and

[30] As described in chapter 2.5 research has also shown that tourism in the Kazbegi region mainly takes place during summer time.
[31] In the case of the Kazbegi region, this concerns the relations to Russia for example; see chapter 2.4.

tapping potentials for linking the sectors could be considered a multi-sectoral approach to counteract risk exposures.

This applies not only to the societal or regional level, as reflected by the increased ability to cope with shocks through the diversification of the working activities and sources of income of households or individuals (Chambers and Conway 1991, p. 11).[32] Hence, as pointed out by several authors, governments should also **support agri-food producers on an individual level** in linking agriculture and tourism, e.g. through access to (micro-)credits for input factors or advice on marketing regional products (Pillay and Rogerson 2013, p. 51; Torres and Momsen 2011, p. 145). In addition, investment in infrastructure could also be a beneficial factor for agri-food producers (Bowen et al. 1991, p. 49), as it can enable them to reach markets more easily for example.

3.3 Research Gap and Objective of the Research

While Pillay and Rogerson (2013, p. 50) observe that the potential for synergetic linkages of agriculture and tourism has been acknowledged by many policy stakeholders, they also admit that so far only "[…] few investigations on agriculture-tourism linkages and their local impacts" (Pillay and Rogerson 2013, p. 50) have been conducted. In addition, in-depth analysis of the use of local agri-food products in the tourism sector is missing in many countries (Ashley et al. 2007, p. 18).

Several studies conducted on linkages of agriculture and tourism have so far focused on the Caribbean (e.g. Bélisle 1983, 1984a, 1984b, Goodwin 1993, Timms 2006; Jamaica (Dodman and Rhiney 2008)). Others exist on other American countries or regions (e.g. Mexico (Torres and Momsen 2004; Torres 2003; Jarquin Sanchez et al. 2017), Hawaii (Bowen et al. 1991; Cox et al. 1995) as well as on Africa (e.g. Tanzania (Anderson 2018), Botswana (Harrison and Maharaj 2013); South Africa (Pillay and Rogerson 2013)), Asia (Shah 2000) with Indonesia (Telfer and Wall 1996), Cambodia (Mao et al. 2014) and Thailand (Choenkwan et al. 2016; Lacher and Nepal 2010), on Europe (Spain (Hermans 1981), the Basque Country (Greenwood 1972), Norway (Frisvoll et al. 2015), Kosovo, Norway and Spain (Arenliu 2015)) and New Zealand (Singh 2012), with highly relevant being those of Bélisle (1983), Dodman and Rhiney (2008), Telfer and Wall (1996), Torres and Momsen (2004) and Timms (2006), among others (Pillay and Rogerson 2013, p. 50).

However, according to the knowledge of the researcher,[33] so far no study focusing on linkages of agriculture and tourism has been conducted on Georgia or the Kazbegi region. Nevertheless, several studies have focused either on agriculture (e.g. GeoWel Research 2015a, Toloraia 2012a) or on tourism in the Kazbegi region (e.g. Heiny 2018, Heiny et al. 2017, Gugushvili et

[32] In the Kazbegi region, the diversification of individual income sources is also a strategic objective of the Kazbegi Development Strategy 2016-2020 (Local Action Group Kazbegi 2016, p. 23 ff.).
[33] The terms "the author" and "the researcher" are used interchangeably in this study, since the person who implemented the research is also the author of this study.

al. 2017, Gugushvili and Salukvadze 2015; GeoWel Research 2015b; Toloraia 2012b; Mamniashvili 2018).

Though not explicitly examining linkages of agriculture and tourism, several authors of these studies point towards potential linkages of the sectors and the need for further exploration. According to Gugushvili et al. (2017, p. 52): “The results of the research show lack of economic linkages between tourism and agriculture sectors in Kazbegi Municipality. As the research revealed […] tourism development increased the need for local agricultural products”. Heiny et al. (2017) also noted that it would be “[…] important to explore chances for generating income regarding agricultural production and touristic services at the local scale” (Heiny et al. 2017, p. 37). Besides this, the reports of development organizations also point in the direction of linkages: “It seems that even locally, a value-chain can be developed so that local producers sell their products in hotels and guesthouses of Kazbegi. But that needs to be accompanied with adequate marketing strategies” (GeoWel Research 2016, p. 14). Thus, though not directly focusing on linkages of agriculture and tourism, these studies provide a solid basis for implementing the current study and show a need for research in this respect.

Independent of the regional focus, in most of the previously conducted research on linkages of agriculture and tourism the focus has been on the demand side (Mao et al. 2014, p. 669). Only in a few cases was the farmer side also interviewed (e.g. Mao et al. 2014, Timms 2006, Singh 2012), with Anderson (2018) interviewing various respondents along the value chain. Contributing to closing this gap, the current study aims at providing insights on both the demand and the supply side of agri-food products.

Thus, this study not only aims to contribute to more knowledge on linking agriculture and tourism as a measure to improve livelihoods in the Kazbegi region, but it also applies an innovative approach of interviewing actors along the agri-food chain in order to obtain an in-depth picture. On a more macro level (again according to the knowledge of the researcher) this is also the only study which analyzes ways of linking agriculture and tourism against the background of rural development and with regard to the adjustment to changes in the sense of the cultural lag of William F. Ogburn.

The overall objective of this research is to identify opportunities for local small-scale agri-food producers to improve their income-generating behavior and adapt to the changing framework conditions for agricultural production, assuming that one way to adjust to the changes could be linking agriculture and tourism via marketing regional agri-food products to the tourism sector in the Kazbegi region. Since “[…] the presence of tourism at destinations does not by itself stimulate sustainable linkages between agriculture and tourism if destinations ignore the importance of creating awareness amongst farmers of the exact requirements of the tourism sector and buyers of the goods and services offered in local markets” (Anderson 2018, p. 171 referring to Mao et al. 2014 and Rogerson 2012), the current study aims at analyzing these requirements and the available agricultural products in the Kazbegi region in detail. This is crucial in order to know what the status for linking agriculture and tourism in the Kazbegi region is and to identify and develop perspective linkages based on the results.

To this end, a closer look is taken at the potentials and hurdles for linking actors of both sectors by analyzing the agri-food chain in the Kazbegi region. Adopting the idea of Kaplinsky (2000,

p. 121) that “the value chain describes the full range of activities which are required to bring a product or service from conception, through the different phases of production […], [and] delivery to final consumers, […]”, the main focus of our study is at the stage of delivering the products to final consumers, either directly by the producer or via service providers in the tourism sector, such as local hotels, guesthouses and restaurants. Against this background, the study is based on the following research questions:

- What are the current bottlenecks in the agri-food chain in the Kazbegi region, in particular at the stage of selling products to the buyers, focusing on tourism service providers and tourists? What are the opportunities?
- How could linkages between the local agri-food sector and the local tourism sector be established?
  - Which requirements do hotels and guesthouses have with regard to sourcing local agri-food products?[34]
  - Which local agri-food products could be suitable for being marketed to the tourism sector?
  - Which marketing options/ways of linking the sectors could possibly be appropriate to tap potentials?

The overall conceptual framework underlying this research study is shown in the following graph:

[34] Please note that in the study at hand the term agri-food product does not only include processed food products, e.g. butter, but all food from agricultural production, e.g. also potatoes or strawberries.

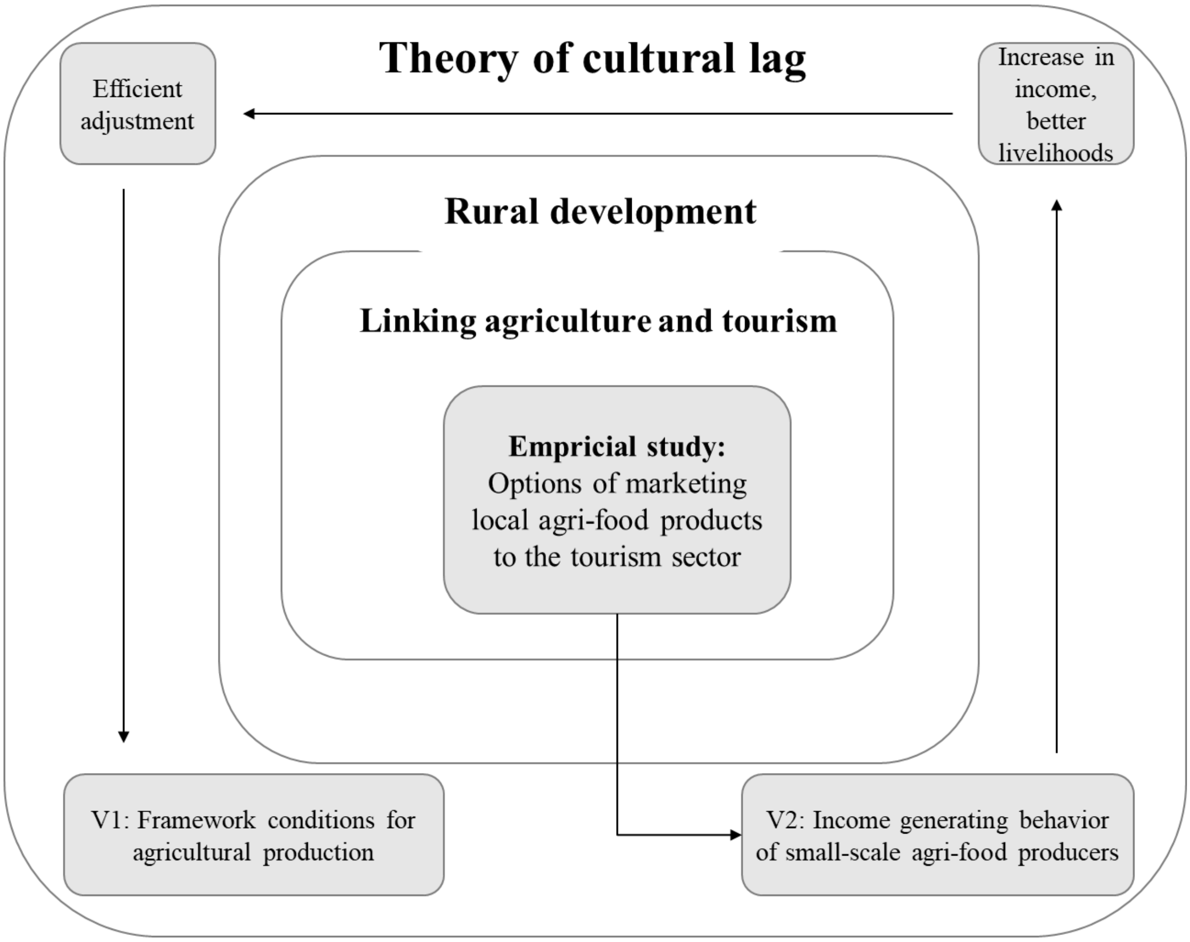


Figure 7: Conceptual framework

Source: Own illustration. V1 stands for variable 1: Framework conditions for agricultural production; V2 stands for variable 2: Income generating behavior of small-scale agri-food producers.

4 Empirical Study

This chapter contains a detailed description of the empirical research approach as well as the results of the qualitative study. Chapter 4.1 contains an outline of the characteristics of the applied qualitative research approach, the method of qualitative content analysis as well as the research design. It also includes a description of the preparation of the exploratory study, the focus group discussions as well as the expert interviews. Chapter 4.2 encompasses the implementation of the study phases. In chapter 4.3 the main steps of the analysis are depicted and the structuring qualitative content analysis applied in this study is introduced. Chapter 4.4 contains a description of the results. The condensed findings are presented in chapter 4.5.

4.1 Methodology and Research Design

The qualitative research approach

As statistical data on the region is only rarely available, gathering primary data from an own survey would generally have been interesting. However, the aim of this study was not a quantitative measurement based on quantitative data, but to answer the research questions without pressing the answers into a pre-defined framework. Thus, applying a qualitative research approach seemed to be more suitable here. In this study, this included the implementation of exploratory interviews and focus group discussions as well as expert interviews.

As pointed out by Denzin and Lincoln: "[…] qualitative research is difficult to define clearly" (Denzin and Lincoln 2017, p. 12) . But, as described by Elliott et al. (1999, p. 2016): "One thing, however that they [the different research approaches; author's note] all have in common is that their central purpose is to contribute to a process of revision and enrichment of understanding, rather than to verify earlier conclusions or theory". This is also reflected by the following – often strongly interrelated – characteristics of qualitative research which occur in several publications and also apply to this study. They mainly derive from Lamnek (2016, p. 38), Flick (2008, p. 22 ff.), Kuckartz (2007, p.66 ff.) and Schreier (2012, p. 20 ff.).

Openness: According to several authors (e.g. Flick 2008, p. 22; Lamnek 2016, p. 38), qualitative research is characterized by a principle of openness. This means that the researcher is open towards the researched or interviewed people, the research setting as well as the methods used. According to Hoffmann-Riem (1980, p. 343) the theoretical background knowledge that a researcher already has *before* starting a study should even be suspended when implementing the study.

Contextuality: As underlined by Flick (2008, p. 23), Kuckartz (2007, p. 67) and Schreier (2012, p. 22) for example, in qualitative research the context of the research is essential and is part of the data and meaning. According to Schreier (2012, p. 22) it includes "[…] the situation in which an event took place or something was said, the history behind the data, and the role of the researcher in the research situation". In this regard, as pointed out by Lamnek (2016, p. 34 f.) and Helfferich (2009) it must be taken into account that qualitative interviews are situations of communication, which means data is generated in highly complex situations that include the subjectivity of those involved (Helfferich 2009, p. 9).

Reflexivity: The reflexivity and the interpretation of data are related to the above-mentioned context, which is also described by Denzin and Lincoln (2017, p. 12): “The interpretive bricoleur understands that research is an interactive process shaped by one’s personal history, biography, gender, social class, race, and ethnicity and those of the people in the setting”. Based on that, according to Schreier (2012, p. 22), even “different interpretations of the same material can be valid”. Thus, as mentioned also by Lamnek (2016, p. 36), Schreier (2012, p. 23) and Flick (2008, p. 23), reflexivity must be taken into account during the research process, encompassing the reflexivity of the interview partners as well as the reflexivity of the researcher.

Flexibility and process-orientation: As described by Lamnek (2016, p. 37) and Schreier (2012, p. 24), qualitative research is characterized by the flexibility to adjust all aspects of the research during the research process. This may range from adjusting the research questions, the type of data collection or analysis methods to adjusting the interview sample to changes occurring during the implementation of the research. It further implies that in qualitative research, methods and tools for data collection or analysis are adapted to the research reality and the aim of the research (see also below under research design), ensuring what Flick calls the **“appropriateness of the method to the issue”** (Flick 2009, p. 268 f.). According to Kruse (2015, p. 125), the adjustment of tools and the sample during a research process is a decisive factor for the success of a qualitative research project.

In contrast to a standardized research approach such as a survey, the aim of a qualitative approach, as applied in this study, is not to generalize results from selected interview cases. Consequently, all results or conclusions presented in the following relate to the studied subjects and people and cannot be considered to be representative. However, referring to Kruse (2015, p. 51 f.), by taking into account the above-mentioned characteristics of qualitative research (in particular the context of the data gathered), the complexity of the reality is also taken into account, which may not be reached by using standardized quantitative approaches. Thus, qualitative research may prevent misinterpretations or wrong conclusions, which are much more likely in standardized, decontextualized quantitative research.

Rationale for the qualitative content analysis

Being only one method within the broad field of qualitative research, qualitative content analysis is the method applied in this study. As pointed out above, the aim of this study is to gather qualitative data through the implementation of interviews. This recorded data is then transcribed to text data. While the basis for the subsequent analysis “can be all sort of recorded communication” (Mayring 2015b, p. 1), as described by Bernard et al. (2017, p.1 ff.), not only a *qualitative* way of analyzing the content of the text but also a *quantitative* way does exist. This quantitative approach of content analysis is reflected in the following statement by Berelson (1952): “Content analysis is a research technique for the objective, systematic and quantitative description of the manifest content of communication” (cited by Kuckartz 2014b, p. 31, and Schreier 2012, p. 13). This citation indicates that the pure term “content analysis” could also be associated with a *quantitative* analysis of qualitative data. Thus, in order not to confuse it with the quantitative type of content analysis mentioned above, the specifying term "qualitative" plays an important role here, as only using the term "content analysis" could be misleading.

In this study, the aim was not only to receive statistics about the frequency of certain expressions and base the interpretation on such figures, but instead the intention was to get close to the data provided in the text. Thus, in line with Kracauer (1952) a *qualitative* type of content analysis seemed to be the appropriate alternative here: "Carrying its explorations beyond the point at which many content analysis investigations prematurely stop, as if fearful of drifting too far from the secure haven of statistics, qualitative exegesis is indeed capable of classifications and descriptions which conform far more closely to the texts than those commonly produced by quantitative analysis" (Kracauer 1952, p. 640).

According to Schreier (2012, p. 16), in the case of quantitative content analysis, theories and prior research are vital and particularly important for hypothesis testing. In contrast, in the case of qualitative content analysis, *describing the gathered data material* is much more relevant. Working directly with the gathered data applies for example to the development of the category system (see for details chapter 4.3). In line with that, qualitative content analysis can be described as "[…] a method for systematically describing the meaning of qualitative material. It is done by classifying instances of the categories of a coding frame " (Schreier 2012, p. 8). [35]

The coding frame or category system is also a centerpiece of Grounded Theory Methodology (Glaser and Strauss 1967).[36] Furthermore, several other characteristics (such as the flexibility to adjust the research process in the course of the implementation, or the purposive sampling mentioned in chapter 4.2) apply to both qualitative content analysis and Grounded Theory Methodology. However, while the aim of Grounded Theory is *theory formation* (Mey and Mruck 2011, p. 23, Glaser and Strauss 1967, p. 1), the aim of this study is to *answer the descriptive research questions*. For this goal, qualitative content analysis is more suitable (Schreier 2012, p. 42) and hence is applied here.

Though the term "qualitative content analysis" might suggest that there is only one way of data analysis, it has to be taken into account that various *procedures* for implementing the actual data analysis exist within the framework of the qualitative content analysis (Mayring 2015b). This is reflected in figure 8 below.

[35] The terms coding frame and category system are both common in the literature. In the study at hand, the term category system is used.

[36] For a comparison of categories in content analysis according to Mayring 2000 and in Grounded Theory Methodology see also Muckel 2011, p. 333 ff.

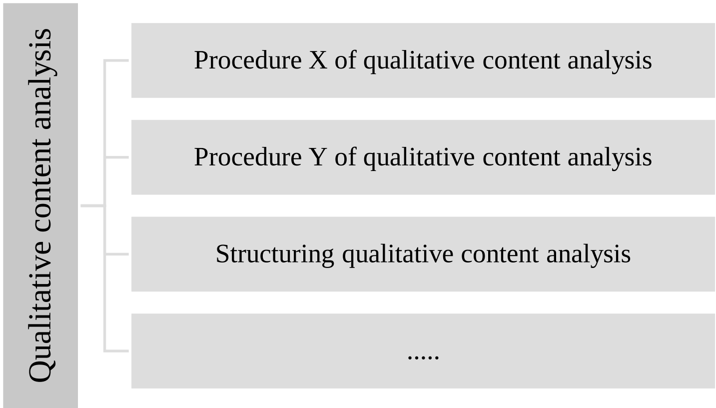


Figure 8: Procedure of qualitative content analysis

Source: Own depiction.

Thus, in line with Stamann et al. (2016, p. 6), it is difficult to talk of "the" qualitative content analysis. The procedure chosen for the analysis of the qualitative data of this study is a **structuring qualitative content analysis** which is described in detail below in chapter 4.3.

Research design and tools

Figure 9 depicts the steps of the research process of this study which were planned to be implemented in order to answer the research questions (compare Schreier 2012, p. 28). As shown by the graph, the study consisted of three field research phases in Georgia: The exploratory pre-study, as well as the implementation of the main study, encompassing focus group discussions and expert interviews. The type of interview and the tools used have been selected in relation to the research subject and interest.

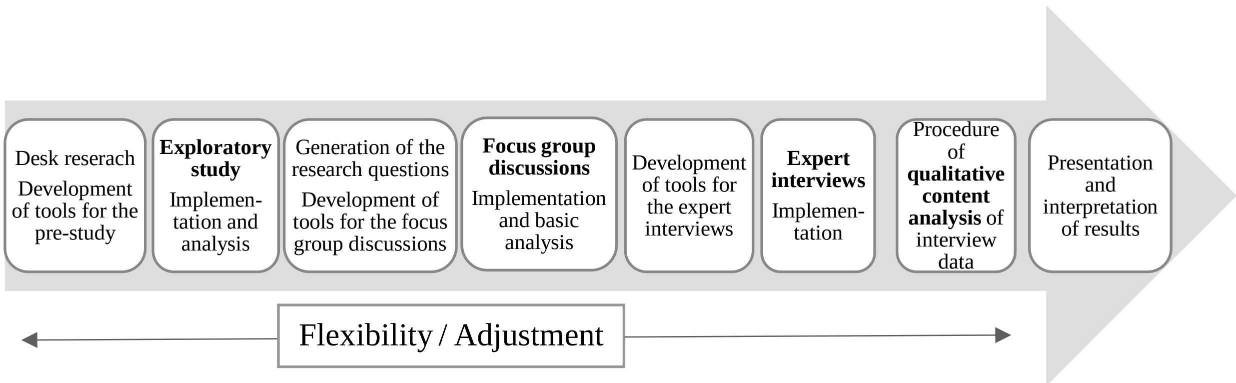


Figure 9: Research process

Source: Own depiction.

Exploratory study

As shown by the graph, the research process did not start with the definition of the research questions but began instead with desk research and an exploratory pre-study as well as the development of tools for the pre-study. One reason for conducting an exploratory study onsite was that the author had never visited Georgia before and thus did not have much background knowledge on the region. Furthermore, there was not much literature on the region available in English language. The pre-study should thus broaden the author's knowledge from the preceding desk research. Referring to the above-mentioned principle of openness, not knowing a lot about the specific situation in the Kazbegi region and only having little theoretical background knowledge was thus an optimal basis for applying an open approach. Nevertheless, the little knowledge acquired through the literature must also be taken into account and may have had an effect on the openness of the researcher.

The specific objective of the pre-study was to get a first overview of the socio-economic situation of the population in the region before implementing the main study. An additional aim was to learn more about agriculture and tourism in the Kazbegi region.

Based on the findings of the exploratory study onsite, another essential aim was to generate the research questions, which are presented in detail in chapter 3.3:

- What are the current bottlenecks and opportunities of the agri-food chain in the Kazbegi region?
- How could linkages between the agri-food and the tourism sector in the region be established? What are requirements of hotels with regard to local agri-food products? Which products are suitable for linking both sectors?

Additionally, the aim was to identify potential interview partners for the main study (focus group discussions and expert interviews). Overall, the exploratory study encompassed exploratory face-to-face interviews as well as observations and photographic documentation by the researcher.

For collecting data, the following **tools** had been prepared before the implementation of the pre-study:

- A letter, describing the AMIES II project and the intention of the study in English and Georgian, which was handed out to the interviewees
- Guiding questions for interviewing local inhabitants, food-producers and representatives of the local tourism sector in order to learn more about agriculture and tourism in the region
- Basic questions to interviewees from organizations in Tbilisi
- Guiding questions to the heads of the communities and the municipality in order to receive socio-economic data
- A table on socio-economic data as well as data on agriculture and tourism to be filled in

- A document for structured meeting minutes in order to summarize the interviews and data of the day and get an indication of which individuals could be of interest for the upcoming interviews[37]

The letter and guiding questions were revised by the Georgian project partner, who is a trained agronomist, in order to ensure that the main issues of interest for getting an overview of the socio-economic situation, agriculture and tourism in the Kazbegi region were covered. However, the aim of these tools was not only to collect the data of the guiding questions; they were also helpful to summarize and reflect the background knowledge gained so far and to better structure the field research.

In addition to the interviews, the aim was to conduct a **network mapping** (according to Schönhuth 2014) in order to get a broader overview of the (business) relationships of the population in the region. The aim was to find out more about personal relationships, e.g. friendship and family relations, and business linkages. The guiding question in this respect was: Does economic exchange mainly take place between friends and family (formal vs. informal flows)? Based on that, a simple tool to conduct a network/actor mapping had been developed based on Schönhuth 2014. The aim was to conduct a pre-test of this tool and check whether it could also be adequate for the implementation of the main study.

Focus group discussions

After generating the research questions, the preparation of the focus group discussions followed. The aim of the focus groups was to receive more detailed information on agriculture and tourism from the population of the Kazbegi region. This included data on local products and their suitability with regard to being produced and marketed locally and ideas on how to link agriculture and tourism.

According to Morgan (1997, p. 6) focus group discussions are "[…] a research technique that collects data through group interaction on a topic determined by the researcher". While the data is thus provided by the participants, the framework for the data of interest is set by the researcher. As the exploratory interviews had already provided some basic information and the second phase of the study should provide more detailed information but still not be too focused (or even restrict answers by applying a standardized approach), focus group discussions were considered to be suitable for collecting data at this phase. In addition, focus group discussions can be implemented in a participatory way (Schulz 2012), which is also in line with the features of the LEADER approach (see chapter 3.2.2). According to Adato and Meinzen-Dick (2007, p. 44) a further advantage of focus groups is that several people can be interviewed at the same time and thereby "create a synergy of ideas when people speak collectively".

As pointed out by Kruse (2015, p. 196), in some cases it might also be better to speak of a group *interview* instead of a group *discussion*, depending on the interaction or discourse among the participants that the researcher wants to achieve. Based on this, according to him focus groups

[37] However, neither the table on socio-economic data nor the document for structured meeting minutes was used intensively onsite since they were too detailed.

are often more like a group interview and less like a real discussion. In this study, the implemented focus group discussions had both characteristics: some parts were more structured as in an interview, while other topics led to a more open discussion among the participants. Thus, the researcher decided to continue using the term focus group discussion here.[38]

The design of a group discussion (including e.g. the members of each group and the type of moderation) depends on the research interest (Lamnek 2005, p. 69 ff.). Different stimuli for the discussion can be used (see e.g. Kruse 2015, p. 198). Since not all local interviewees were fluent in English, the focus group discussions were not implemented by the author but by a Georgian moderator. For this reason, it was decided to use simple stimuli which are not difficult to explain or implement, such as guiding questions to structure the discussions and cover the main topics of interest.

The following **tools** were developed before implementing the focus group discussions:

- Discussion guidelines for each focus group (see Annex 1)
- Short questionnaire on personal data of the participants (age, occupation etc., see summary in chapter 4.2.2)
- A postscript to describe the interview situation, including interaction and content
- A privacy declaration that had to be signed by the moderator of the focus group discussions in order to ensure that he informed the participants that the recordings are only used for the purposes of research and that their names would not be published

Due to financial and time constraints, the interview guidelines could not be pre-tested in a Georgian setting. However, they were proofread by the Georgian project partner in order to make sure that they are understandable and fit to the interview situation and the cultural background in Georgia.[39]

In order to adhere to the above-mentioned principle of openness but at the same time structure the interview in a way to receive data to answer the research questions, in line with Helfferich (2009, p. 182 ff.) the discussion guideline was developed according to the German "SPSS principle" or, in English, the "CCSS principle", standing for "collect, check, sort, subsume".[40] Although Helfferich (2009, p. 182 ff.) describes a general procedure for developing *interview* guidelines, this can also be applied to group *discussion* guidelines (Kühn and Koschel 2011, p. 129). As a first step, all questions that come up and are related to the research questions and of interest are collected. In a second step, it is checked whether these questions are really relevant and adequate, and they are then reduced, adjusted and reformulated. The third step includes the sorting of questions into main topics, and in a fourth step the topics are arranged hierarchically and subsumed to specific phases of the interview guidelines. Based on this approach, the structure of the discussion and interview guidelines for this study were developed. The discussion guidelines for the focus group discussions contain an introduction, a warm-up phase,

[38] The term focus group *discussion* had also been used in the proposal for the AMIES II project, in which this study is embedded.
[39] The fact that the Georgian project partner is a trained agronomist was conducive for this task.
[40] Freely translated by the author.

three main topics, and an ending phase with final questions such as “have we missed anything?” (compare to Krueger 2002, p. 7). The thematic blocks contain sub topics in the form of bullet points as well as simple questions, which can also be formulated in a different way by the moderator.

Expert interviews

Based on a basic analysis of the focus group data, the author started preparing the tools for the expert interviews. The expert interviews should provide more in-depth data to answer the research questions and also take up topics that arose during the focus group discussions. The type of expert interviews conducted can be defined as *systematizing expert interviews*, following Bogner et al. (2014, p. 24). This type of expert interview helps to systematically gather specialist knowledge and fill information gaps that have not been covered in the preceding research process (Bogner et al. 2014, p. 24). As this is in line with the above-mentioned aim of the expert interviews to gather more detailed data, this type of expert interview has been chosen within the framework of this study.

Before implementing the expert interviews, the following **tools** were developed:

- Interview guidelines (see Annex 2)
- Declaration of consent

To gather the data needed for an in-depth answer of the research questions, in line with Bogner et al. (2014, p. 24), the interview guidelines contained detailed questions and follow-up questions. Nevertheless, to adhere to the principle of openness, open questions were included in addition to stimulate the experts to introduce new topics. The development of the interview guidelines also followed the above-mentioned “CCSS principle” (in line with the “SPSS principle” of Helfferich 2009, p. 182 ff.). Hence, as in the case of the discussion guidelines for the focus groups, the interview guidelines started with an introductory part and warm-up phase, then continued with thematic blocks and ended with summarizing and open questions about missing topics. The interview guidelines were adjusted to the people interviewed. This means the main parts and most of the thematic blocks were the same in all guidelines, but one or several thematic blocks at the end were adjusted to the specific knowledge of the respective expert and contained e.g. specific questions on tourism in the village where the interviewee was raised.

This demonstrates that the topics were structured, and clear questions were defined before the implementation of the interviews. Nevertheless, in the framework of this study, it was also possible to change the order of questions or add questions in situations where new topics arose during the implementation of the interviews. This also applied to the focus group discussions. Thus, the interview and discussion guidelines used in this study had more the character of “cheat sheets” to ensure that all topics of relevance are covered (compare Kruse 2015, p. 204).

The type of interviews and tools selected here can be assigned to the category of *thematic interviews*, as described by Marotzki in Bohnsack et al. (2010, p. 153f.). Thematic priorities are set with the help of the interview guidelines and already gathered knowledge on the topic of interest. In the framework of the thematic topics the aim is to “tap the narrative potential” of the expert by using open questions (Marotzki in Bohnsack et al. 2010, p. 153f.).

The interview guidelines for the expert interviews were also revised by the Georgian project partner. In addition, as a pre-test of the interview guidelines, one interview was conducted with the manager and publisher of the magazine “The Georgian – Tourism and Trade Guide to Georgia” who is also an agritourism expert and originally from the Kazbegi region. As there was no opportunity to travel to Georgia for pre-testing the interview guidelines, this interview was conducted via Skype. For technical reasons, the talk was interrupted various times. Nevertheless, the guidelines provided a good basis to implement the interview and were thus used for the other interviews as well in versions adjusted to the respective experts. When implementing the interviews following the pre-test, a declaration of consent was handed out to the experts in order to have their agreement for recording the interviews and using the data for publication. In the case of the pre-test, this was not necessary since the interview via Skype was not recorded.

Data analysis

The analysis of the data of the focus group discussions as well as the expert interviews was implemented by applying the procedure of a *structuring qualitative content analysis*. Details are described in chapter 4.3.

Presentation and interpretation of results

After analyzing the text data of the focus group discussions and the expert interviews, the results of the different study phases were interrelated, compared and summarized, presented (e.g. in the form of this thesis), and interpreted and discussed in relation to the research questions (see chapters 4.4, 4.5 and 5).

4.2 Implementation of the Study

This chapter describes the sampling methods used and the access to the gatekeepers and interviewees. Furthermore, the interviewees and the organizations they work for are depicted. In addition, the implementation of the study phases and the hurdles or difficulties that arose are outlined.

As mentioned above, this study was conducted within the framework of the AMIES II project. The project unit on socio-economics was implemented in close cooperation with two Georgian professors, two Georgian master students and a Georgian PhD student. They were of utmost importance for getting access not only to the country and the academic sphere, but also to the local population of the Kazbegi region. In particular the Georgian project partner was crucial for the implementation of this study. As a trained agronomist, he has working experience with several organizations who are involved in rural and agricultural development in Georgia, and he established essential contacts for the implementation of the study.

4.2.1 Pre-Study – Exploratory Interviews

The field research of the pre-study was conducted in July 2014[41] in Tbilisi and in the Kazbegi region. In Tbilisi, interviews with representatives of development organizations were conducted. Afterwards, some days were spent onsite in the Kazbegi region in order to get in touch with the local population and to interview heads of villages there. Due to their exploratory character, some interviews which were conducted in Tbilisi in 2015 are also subsumed under this phase of the project.

After defining the objective of the pre-study based on the desk research, the Georgian project partner was contacted to discuss who could be interesting to interview in order to gather the desired data. Among the selected people were heads of the communities and the municipality of the Kazbegi region, as well as other actors from the state and non-state sector in the areas of tourism, food service and agriculture. These interviewees were selected because of the specific expertise or position they have. Thus, a **purposive sampling** was applied. The Georgian project partner established the first contacts with the interviewees via phone calls in Georgian as it turned out that e-mails of the researcher were sometimes answered very late or not at all.

Firstly, interview partners from organizations in Tbilisi were met to receive basic information. Afterwards, the interviews in the Kazbegi region were implemented. In order to have the opportunity to clarify questions which arose during the interviews in the region, some further interviews with representatives of organizations took place in Tbilisi.

While the heads of the communities in the Kazbegi region were selected by a purposive sampling, this did not apply to other local interviewees. Some of the people who were purposively sampled recommended talking to other local people who belonged to their circle of acquaintances. In these cases a **snowball sampling** was applied. However, the majority of the interviewees were contacted directly by the researchers without an additional contact person or “gatekeeper” (see e.g. Kruse 2015, p. 251). Together with the Georgian project partner, the researcher visited some of the villages in the region in order to get an overview of the situation onsite and to document that. Whenever people who could have relevant knowledge for the study were seen, the researcher and the Georgian project partner addressed them. Such informal chats were mainly implemented with farmers working on the fields. In addition, the researcher and the Georgian partner visited local cafés, restaurants, hotels and guesthouses to informally interview people there.

In line with the aim of gathering data on the socio-economic situation, agriculture and tourism in the region, different types of interviewees were met. Table 3 provides information on the types of interviewees, the main information gathered from them[42] and the number of interviewees.

[41] The respective dates of the study phases have to be taken into account with regard to the results or when comparing data of the different study phases.

[42] However, the information listed here is not restricted to the interviewees listed in the same row and only provides information on the main topics of concern of the group mentioned in the same row. Some interviewees have provided also information on other topics than the ones mentioned for them specifically. The table also includes

Table 3: Interviewees of the pre-study

Interviewees	Information/Topic	N
Heads of communities and the head of the Kazbegi Municipality	Socio-economic information	4
Food producers in the Kazbegi region	Agricultural production and food supply, demand for agri-food products	22[43]
Input supplier	Input supply for agricultural production	1
Food safety expert	Food safety	2
Representatives of retail shops and market stands in the Kazbegi region	Origin of food products sold	4
Traders and representatives of the bazaar and supermarkets in Tbilisi	Origin of agri-food products, requirements	5
Representatives of hotels, guesthouses and restaurants in the Kazbegi region	Food provision for tourist consumption, demand of tourists	8
Other representatives of the tourism sector in the region	Touristic activities	1
Representatives of organizations or individual experts concerned with rural development in Georgia	Current topics in rural development and food security, development projects, rural tourism	10

Source: Own compilation.

All interviews were conducted face-to-face. The interviewees were asked open questions along the guiding topics of socio-economics, agriculture and tourism. Since no structured interview guidelines had been compiled for the implementation of the exploratory interviews onsite, they were similar to a normal conversation. In particular, the interviews which were conducted with people other than those selected by the purposive sampling had an informal character, since the people were contacted without appointments, spontaneously on the street, field or at their workplace. Furthermore, no formal data collection such as video recording took place. None of the interviewees of the pre-study knew the researcher before the study. Thus, in order to

information on informal interviews conducted in 2015 with representatives of supermarket chains, the bazaar of Tbilisi and a trading company, which – as mentioned above – are included here due to the exploratory character they had.

[43] This is a conservative number, since not all of the interviewees were present during the whole interview. E.g. during discussions with agri-food producers in Kanobi, some left the discussion and then came back again. Due to this „come and go“ situation, this figure only takes into account the number of persons who were there constantly.

establish trust and not make the people feel uncomfortable, the interviews were not recorded. In particular, when people are interviewed and recorded for the first time, the recoding could disturb interaction and lead to less spontaneous answers (Kuckartz 2014b, p. 123). Hence, the interviewer only took notes to remember what was said.

Not all interviews were conducted in English language. Some of the interviews were also conducted in Georgian with the help of the translation of the Georgian project partner. He translated the questions of the author from English to Georgian and the answers of the interviewees from Georgian back to English.

The interviews in Tbilisi mostly took place at the offices of the interviewees or at other workplaces, e.g. at a supermarket or bazaar. As mentioned above, the interviews in the Kazbegi region often took place when people where working on the fields or at their workplace in a café or hotel. Hence, in these cases they were interviewed in their natural surrounding and part of the context of the interviewees was directly visible to the researcher. In some cases the interviewees were met in a café.[44] Though this was on the one hand more comfortable to take notes, on the other hand the context and background information was reduced.

An additional aim during the pre-study was to conduct a **network mapping** with one of the interviewees to pre-test the method. An agri-food producer from the region was asked and was willing to do the pre-test. This person furthermore seemed to be suitable for testing the approach due to the open behavior during an interview. Since one person was sufficient to pre-test the method, no other people were asked.

The network analysis was implemented at a small kiosk at the road side. A document with circles of different geographical levels (local, regional, national) relevant for the mapping was provided to the agri-food producer. On this "map", friends, family members or business partners and the flows of products between these people and the agri-food producer were drawn. To this end, the researcher asked the interviewee about the suppliers and buyers of agricultural goods, and to whom products are provided for free. In addition, the type of relationship the agri-food producer had with them (business relationship, kinship, friendship etc.) was added on the circle/map. Being a participatory method, the aim was to fill out the document together with the interviewee. Though the interviewee tried to be collaborative, in the following he informed the researcher that he did not feel comfortable with this method as too much private information would be required that he did not want to provide.[45] The researcher furthermore noticed that it was quite time-consuming to properly explain and apply the method. It appeared that the pre-tested method was not adequate for the researched person and the conditions. Hence, it was decided not to continue using this method within the framework of this study, and instead to gather the desired information from the focus group discussions and expert interviews. However, though having been rated negatively, this one implemented case could also provide some interesting insights on the relation of business relationships and private relationships.

Based on the previously prepared documents and tools, the researcher took notes on the interviews and people met. However, not all information indicated in the prepared documents

[44] In these cases, the cafés were not places where the interviewee worked, but only locations to meet.
[45] For this reason, the results of this mapping in the form of the filled in circles are not provided here.

could be gathered. Nevertheless, as the documents mainly served for structuring the topics of interest before the study, this was not considered a shortcoming. Furthermore, in case of the document on the village characteristics, certain information could not even be provided by the heads of the villages, e.g. the exact number of animals in a village or the percentage of people involved in commercial farming. During the whole pre-study onsite in the Kazbegi region, observation by the researcher took place and photos were taken by the researcher to document the situation onsite, e.g. the status of infrastructure in the villages.

The interviewees and people in the region were generally very open and friendly to the researcher. Still, one hurdle for getting closer to the interviewees and potentially also receiving more information from them might have been the fact that the researcher does not speak Georgian. Although the Georgian project partner tried to translate everything and was thus of great help, the contact with local people would most likely have been different if the researcher herself had been in the position to approach people and explain the research interest in her own words.

4.2.2 Focus Group Discussions

The selection of potentially interesting focus group participants was based on the people who were met and the data which was collected in the course of the exploratory study. The aim of the focus group discussions was to gather more data on different stages of the value chain in order to answer the research questions.

As the pre-study had revealed, there are not only small-scale agri-food producers in the Kazbegi region, who produce mainly for their own consumption, but also some market-oriented farmers. Hence, it was decided to implement two focus group discussions with different types of agri-food producers in order to cover more aspects of the agri-food chain and look at it from different perspectives. Related to the market-orientation of some farmers, also data on the market for agricultural products was needed for answering the research questions. Hence, a group discussion with representatives of local shops and the tourism sector was also implemented.

Table 4: Potential focus group participants

Focus group	Potential focus group participants	Main stages of the value chain
Market-oriented farmers who mainly sell their products	Potato grower from Sno, livestock farmer from Akhaltsikhe, lettuce and strawberry growers from Sioni, trout producer from Sno, and others	Input supply, production, trade, final sale
Local market (e.g. shop owners) and tourism sector representatives	Shop owners, sellers, owners or managers of guesthouses or hotels in the region whose main source of income is tourism	Final sale, consumption
Small-scale agri-food producers who mainly produce for their own consumption but would be interested in establishing marketing structures	Beekeepers from Kanobi, potato growers from Sno, other small-scale agri-food producers, contacts through village heads	Production, consumption

Source: Own compilation.

The table above provides only a rough list of potential interview partners resulting from the exploratory study. Unfortunately, when implementing the focus group discussions only a few of the people the researcher planned to include in the discussion had time or were willing to be part of the discussions, and the groups could not be composed according to the plan of the researcher. However, other people from the region who are active in agriculture or tourism, or in both sectors, were willing to participate. Although it was planned to apply a purposive sampling to compose the groups according to the required data, the final composition of the focus group discussions depended to a high degree on the mere availability of the participants and their spontaneous agreement to participate.

As the majority of the local people do not speak English, they were contacted by the Georgian project partner in Georgian language and not by the researcher herself. Nevertheless, the Georgian project partner was also not successful in fixing a date for the discussions with the participants before being in the region. Hence, it was only possible to agree on the final date for the implementation when the researcher and the Georgian project partner were onsite. Consequently, for some potential interviewees the final planning was very spontaneous, and they were not able to participate because they had other obligations. An additional hurdle with regard to the participation might have been the fact that the potential discussion members were informed beforehand that the discussions would be video recorded.

The description of the final participants of the three focus group discussions is based on a short questionnaire, which was handed out to them at the introductory phase of the discussions, and on their description of themselves at the beginning of the discussions.

Focus group 1: Market-oriented farmers

The focus group of the market-oriented farmers was composed of three women and two men who all have a university degree. At the time of the implementation of the focus group discussions, they lived in the villages Sioni and Sno and their agricultural activities included growing broccoli, cauliflower, lettuce, potato and strawberry, and one man also had cattle and sheep. Two of the participants also worked at the agricultural information and consultation center of the Kazbegi municipality. One of them also worked as a teacher.

Focus group 2: Tourism sector representatives

The focus group of the tourism sector representatives was composed of three women and three men, with two of them having a vocational education and four having a university degree. While the research took place, they lived in Gergeti and Sioni and either supported a guesthouse owned by the family, owned a guesthouse or worked as a tourism guide. One of them owned a small restaurant in the center of Stepantsminda. In addition, they were also active in agriculture.

Focus group 3: Small-scale agri-food producers

While in focus group 1 and focus group 2 the gender ratio was balanced, focus group 3 with the small-scale agri-food producers was solely composed of women. They were from Stepantsminda and Gergeti and were all involved in agricultural production (without specifying that in the questionnaire). Three of them have a vocational education and three of them a university degree. At the beginning of the discussion they described their involvement in potato growing and producing dairy products.

Interview situation

As the researcher herself did not speak Georgian and most of the focus group participants did not speak English, the focus group discussions were implemented in Georgian language with the help of the Georgian project partner, who acted as the moderator of the discussions. Beforehand, the researcher instructed the Georgian project partner on the use of the prepared interview guideline and on how to moderate the discussions. In addition to the moderator, the researcher and two other assistants belonging to the AMIES II project were present during the focus group discussions. They took care of the video and audio recording, observed the discussions and took notes. In addition, photos of the settings were taken.

There were no financial incentives provided to the participants of the focus group discussions, as this was not possible within the framework of the project and might also have led to biases regarding the composition of the groups. Instead, during the discussions food and coffee was offered to the interviewees. Fortunately, this led to only few disruptions during the discussions. Interruptions took place only twice: the first time, when the food was served and the second time, when a phone rang. According to Kuckartz (2010, p. 41), such interruptions are also relevant with regard to the success of an interview and its analysis.

The atmosphere during focus group discussion 1 with the market-oriented farmers (in the following referred to as FGD1) seemed to be good, as the participants were joking a lot and all seemed to know each other. Most of the time, the participants were listening to each other, but sometimes the discussion became lively and various people spoke at the same time. One of the interviewees spoke a lot and sometimes dominated the discussion. When the topic "cooperation" was discussed, the mentioned participant became a bit upset and even stood up to state his position. Interestingly, the topic "cooperation" was mainly discussed by men. Despite the short upheaval, after some minutes the discussion continued to be relaxed again. In many cases, the focus group participants answered to the direction of the moderator, who provided the stimuli for the discussion in the form of guiding questions, and not to all members of the group.

For focus group discussion 2 with representatives of the tourism sector (in the following referred to as FGD2) the situation was quite similar. The people seemed to know and appreciate each other, and the discussion was lively and lots of jokes were made. The topic "cooperation" again was discussed mainly by men, while the women of the group seemed to be bored. Compared to the implementation of the FGD1, the participants of this group discussed more and did not only respond to the direction of the moderator. However, this might have been due to a different style of moderation when implementing FGD2.

Compared to the first two discussions, the atmosphere of focus group discussion 3 with the small-scale agri-food producers (in the following referred to as FGD3) was much more serious and quieter. While one of the participants sometimes dominated the discussion, another participant said nothing at all. In general, the answers and discussions with regard to the main topics of the guideline were shorter than in the case of the other discussions (which might also have depended on the style of the moderation). This is also reflected by the interview duration, which was only 40 minutes in the case of FGD3, while it was approximately one hour in the case of FGD1 and FGD2. However, in all cases the researcher had expected a longer duration of the discussions.

4.2.3 Systematizing Expert Interviews

Since two of the three focus group discussions were composed of agri-food producers, data could mainly be collected on the production stage of the value chain. For this reason – and as one aim of the expert interviews was to fill the gaps of the preceding study phase – the potential experts for the expert interviews should provide more detailed information on the last stages of the agri-food chain, such as final sale and consumption, which are also the essential chain stages with regard to the research questions.

Based on this aim, a **purposive sampling** was employed. Also for this sampling, the contacts established during the exploratory study were of great help, on the one hand to get in touch with some experts via these contacts and on the other hand some of the people contacted during the pre-study could be considered experts themselves.

This leads to the question of who is considered to be an expert in the study at hand. Various definitions of the term "expert" exist, for example for Gläser and Laudel (2010, p. 12), an expert is "a source of specific knowledge on a social situation". However, this is a very broad definition. In this study the definition of Bogner et al. (2014, p. 13) is followed, who describe an expert as a person who not only has knowledge on a specific issue, but whose knowledge and assessments also have influence on the framework for action of others.

In this study, this included people involved in development projects in the Kazbegi region (e.g. representatives of ENPARD) or representatives of organizations involved in the field of rural and agricultural development in Georgia. In addition, representatives of the tourism sector were considered experts if they not only had a specific knowledge on the tourism sector but also had influence on the framework for action of other actors. In this study, representatives of the Rooms Hotel and Zeta Camp (see description below) were considered experts due to their likely influence on other actors of the tourism sector in the Kazbegi region. Being the biggest hotel in the region, the Rooms Hotel has a strong influence on decisions of other tourism actors in the region, as the researcher was also told during the pre-study. Zeta Camp, or rather the owner of the camp, acts as a pioneer for other actors of the tourism sector in Juta and might thus provide orientation for others, which, according to Bogner et al. (2014, p. 14), is also a characteristic of expert knowledge.

Table 5 below includes the type of experts who were already identified as potential interview partners for the expert interviews after the pre-study. The right column contains the stage of the value chain on which data should be gathered.

Table 5: Potential interviewees for the expert interviews[46]

Potential interview partners	Stage of the agri-food chain
Experts of development organizations or projects in Tbilisi: e.g. People in Need, Georgian Farmers' Association, ENPARD	Whole agri-food chain
Bigger hotels in the region: e.g. owners or managers of the Rooms Hotel, a new hotel in Sno, Zeta Camp, a hotel in Juta and others	Final sale, consumption
Supermarket chains in Tbilisi: e.g. representatives of Carrefour and Goodwill	Final sale, consumption

Source: Own compilation.

[46] See the description of the companies or organizations below.

The final selection of the interviewees for the expert interviews depended on three factors:

- information gaps that still had to be filled along the agri-food chain in order to answer the research questions after the focus group discussions,
- relevant topics that arose in the course of the focus group discussions,
- the availability of the potential interview partners and the English language skills of the experts.[47]

Almost all experts that the researcher already had in mind after the pre-study could be convinced to become interview partners. Additional people to be interviewed as experts were recommended by the Georgian project partner. Finally, the organizations and experts depicted in table 6 were selected for the interviews.

Table 6: Interviewed experts[48]

Organization[49]	**Position of the expert[50]**	**Abbre-viation**
Georgian Farmers' Association (GFA)	President	E1
Agricultural Cooperatives Development Agency (ACDA)	Head	E2
Elkana	Rural Tourism Coordinator	E3
People in Need (PIN): implementing LEADER	Project Manager Local Action Group (LAG) Kazbegi	E4
Food and Agriculture Organization of the United Nations in Georgia: capacity building for the Ministry of Agriculture (FAO 1)	National Project Manager	E5
Food and Agriculture Organization of the United Nations in Georgia: capacity building for the ACDA (FAO 2)	National Consultant on Farmer Organizations	E6
Caucascert	Director	E7
Evoluxer: capacity building to ACDA	Agribusiness expert	E8
Rooms Hotel	General Manager	H1
Zeta Camp	Owner	GH1
Goodwill	Head of Quality Department	S1

Source: Own compilation.

[47] As the translation of interviews leads to a more difficult interview situation (through interruptions etc.) and the translation is also costly, it was decided to implement the expert interviews – as far as possible, with some exceptions – in English language, so that the researcher herself was in the position to conduct the interviews.
[48] The parts of the table which are shaded in grey indicate the organizations which are involved in the implementation of ENPARD.
[49] This also includes companies and projects.
[50] Though here the position is indicated, in the following, in most of the cases the experts, independent of their position, are called „representatives" of the organization, company or project they work for or own.

Description of the experts' organizations

In the following paragraphs, a brief description of the experts' organizations is provided. Firstly, the organizations which are mainly active in the field of agriculture and were expected to provide information on the whole agri-food chain are presented. Then, companies from the tourism sector and a supermarket are presented, which were selected to deliver data on the stage of final sale and consumption of the agri-food chain. It would have been good to conduct additional interviews related to the stage of final sale and consumption directly with tourists. However, this would have gone beyond the scope of this study and was not possible for financial reasons and time constraints.

Georgian Farmers' Association

The Georgian Farmers' Association (GFA) was founded in 2012 and since then has promoted the rights of Georgian farmers. The objective is to link farmers to markets and support them in marketing their products. GFA mainly targets small-scale agri-food producers as well as farmers involved in cooperatives. The association also promotes the importance of farmers in order to improve the image of farmers in Georgia. It is an umbrella organization which in 2016 had 1,600 members in nine Georgian regions. GFA brings together different stakeholders of the agricultural sector, and links private sector needs and government support. Furthermore, farmers are supported with information, market research and monthly reports. GFA cooperates closely with the Agricultural Cooperatives Development Agency as well as with development organizations.[51] The interviewed expert was the chairwoman of the GFA, who has been selected due to her profound knowledge of farmers' needs throughout Georgia.

Agricultural Cooperatives Development Agency

In 2013 the Law of Georgia on Agricultural Cooperatives was put into practice. In the framework of this law the Legal Entity of Public Law Agency for the Development of Agricultural Cooperatives (ACDA) (which is under control of the Ministry of Agriculture) has also been established. The main objective of the ACDA is to support the development of agricultural cooperatives in Georgia. This is achieved through grants and by monitoring the status of agricultural cooperatives based on certain rules. In addition, it also develops state support projects in order to contribute to the sustainable development of Georgian agricultural cooperatives. In the case of violations of the requirements, the ACDA may also terminate the status of a cooperative. A further objective of the agency is to raise awareness of the benefits of cooperation among rural inhabitants.

The overall objective of the ACDA is to increase the productivity and effectiveness of agricultural production and to contribute to the development of rural areas through the promotion of cooperatives. The ACDA supports the preparation of proposals for agricultural

[51] Sources: http://enpard.ge/en/georgian-farmers-association/; https://www.facebook.com/gfa.com.ge; both pages checked on March 12, 2019; interview with chairwoman of the GFA in February 2016.

cooperatives, and also supports capacity building via trainings and offers advice with regard to various issues concerning the establishment and management of cooperatives. Furthermore, the agency organizes events and workshops. According to the homepage of the ACDA, there are currently 1,206 agricultural cooperatives listed in Georgia, out of which 72 are located in Mtskheta-Mtianeti, which the Kazbegi region also belongs to.[52] For this study, the head of the ACDA has been interviewed.

Elkana

The Biological Farming Association Elkana is an NGO which focuses on the development of organic farming. It also aims to contribute to the protection of the environment and the improvement of the socio-economic conditions of rural populations. Projects are mainly implemented in the field of rural development, ranging from agriculture to rural tourism and the conservation of biodiversity. Elkana also provides training on sustainable organic farming and extension and supports agricultural cooperation and farmer groups. It also supports the commercialization of small-scale agri-food producers and helps to develop and promote agri-food products. Within the framework of rural tourism development, it also tries to increase awareness of organic and traditional food. In 2016 Elkana worked with 1,000 farmers in Georgia (Elkana 2016).[53]

Elkana is an implementing partner of People in Need in the framework of the ENPARD program, which is implemented in the Kazbegi region. Among other roles, the organization was responsible for the assessment of the agricultural opportunities in the Kazbegi region (Local Action Group Kazbegi 2016, p. 8). Thus, it was expected that useful information on the agricultural sector could be provided by the selected expert, who is also a rural tourism coordinator of the organization.

Other experts who were also interviewed in the course of this study represent organizations who are involved in ENPARD, through which the LEADER approach is implemented in the Kazbegi region (see chapters 2.4, 2.5. and 3.2.1). Among them are People in Need, FAO Georgia and Evoluxer (see the following paragraphs).

People in Need

People in Need (PIN) is a non-profit NGO from the Czech Republic, which was founded in 1992. It is a development organization which raised more than 80,000 Euro from different donors such as the Czech Republic and UN agencies (in 2017) and has around 1,100 employees worldwide. PIN started working in Georgia in 2006, and in 2017 it spent around 5% of its budget there. Its main focus there is to reduce poverty in rural areas. The organization supports small-scale subsistence farmers, and also civil society development and inclusion. In the

[52] Sources: http://enpard.ge/en/agricultural-cooperatives-development-agency-acda/; http://acda.gov.ge/index.php/eng/static/79; both pages checked on March 12, 2019; Interview with the head of the ACDA in February 2016.

[53] Source: http://www.elkana.org.ge; checked on March 12, 2019.

framework of ENPARD, PIN implements the LEADER approach in the Kazbegi region through the establishment of a Local Action Group (LAG). Through the LAG it brings together the local government, farmers, entrepreneurs and other inhabitants of the region in order to work jointly on the socio-economic development of the region. In Kazbegi, PIN also conducts research and supports capacity building of the local stakeholders. The LAG has developed a development strategy for the Kazbegi region from 2016 to 2020 (Local Action Group Kazbegi 2016).[54] The interviewed expert is the project manager of the Local Action Group Kazbegi. The person has been selected as an expert due to the profound knowledge of the socio-economic situation and particularities of the Kazbegi region. The expert additionally has an in-depth knowledge of agricultural value chains and related bottlenecks.

FAO Georgia

The main aim of the Food and Agriculture Organization of the United Nations (FAO) is to defeat hunger in the world. In Georgia, FAO has a presence in Tbilisi since 2004, with currently 18 employees. The main aim of the FAO in Georgia is to promote food security. To this end the FAO in Georgia assists the Government of Georgia to achieve its objectives in the field of institutional development, regional and sectoral development, value chain development, as well as with regard to food safety, veterinary and environmental issues.

FAO is also involved in the implementation of ENPARD in Georgia and provides technical assistance to the Ministry of Agriculture of Georgia. This includes supporting the implementation of the Strategy for Agricultural Development in Georgia 2015-2020 (Ministry of Agriculture of Georgia 2015) and the Rural Development Strategy of Georgia 2017-2020 (Ministry of Agriculture of Georgia 2017) (see chapter 2.2) as well as support in the area of farmer cooperation.[55]

Two experts of FAO Georgia who are involved in the ENPARD project were interviewed in the framework of the current study. One of them was selected as an expert before the study. The other person was met by chance when the researcher was onsite at the premises of FAO in Tbilisi, and it was decided to interview him as well. Due to their in-depth knowledge on food security, the work of the Ministry of Agriculture in Georgia, and topics related to rural development and agricultural cooperatives, both people seemed to be suitable experts for this study.

Evoluxer

Evoluxer is a consulting company from Spain which is also involved in the implementation of ENPARD. The company specializes in project management and implementation and mainly

[54] Sources: http://pin.ge/; http://pin.ge/?page_id=147&parent_id=140; http://www.kazbegilag.ge/en; http://www.kazbegilag.ge/en/ourwork; https://www.clovekvtisni.cz/en/who-we-are/finance-management; all pages checked on March 12, 2019.

[55] Sources: http://www.fao.org/about/en/; http://www.fao.org/georgia/fao-in-georgia/en/; http://enpard.ge/en/fao/; all pages checked on March 12, 2019.

supports public administration in applying European standards and with regard to adapting to the process of European integration. In Georgia, Evoluxer provides capacity building to the Agricultural Cooperatives Development Agency (ACDA). Among others, the aim is to develop the structure of the ACDA in line with organizational structures of similar but more developed organizations in Europe. Besides training staff members of the ACDA, guidelines and handbooks for farmer cooperation are also developed.[56] The interviewed expert has profound knowledge of agribusiness and it was also expected that the interviewee could provide an outside view on the development of the ACDA and the situation of farmer cooperation in Georgia.

Caucascert

Caucascert Ltd was founded in 2005 and is the first organic certification company of Georgia. It aims to support the development of an organic market in Georgia and supports the development of organic agriculture in Georgia, as well as the exportation of organic agricultural products from Georgia to the European Union and Switzerland. Caucascert is responsible for the inspection and certification of organic products. In July 2018, 68 operators involved in organic production or processing were certified or were in transition from conventional to organic operations.[57] In cases where producers do not adhere to the agreed standards, Caucascert is also able to withdraw certificates. Caucascert also is accredited according to ISO-17065 by the German accreditation body DAkkS, and it is included in the list of third-country equivalent organic certification agencies. Besides providing the actual certification, Caucascert is involved in the development of standards and in awareness raising activities with regard to organic agriculture.[58]

The director of this company has been selected due to broad experience in the field of organic certification and knowledge about the situation of organic production in Georgia, which could also be relevant with regard to the development of linkages between the agri-food chain actors and buyers from the tourism sector in the Kazbegi region.[59]

Rooms Hotel

Rooms Hotel is an independent brand for lifestyle and design hotels in Georgia and focuses on attracting young international travelers. Two hotels and one hostel of the brand are located in Tbilisi (Rooms Hotel Tbilisi, Stamba Hotel and Fabrika Hostel) and one is located in Stepantsminda (Rooms Hotel Kazbegi). The luxury hotel Rooms Hotel Kazbegi, with around 150 employees, opened in 2012 and offers 155 rooms with rates ranging from approximately 120 to 240 USD per night. It is equipped with a swimming pool and a casino, and offers various activities to its guests (see also chapter 2.5). Founded by the Georgian casino entrepreneur

[56] Source: http://enpard.ge/en/evoluxer/; checked on March 12, 2019.
[57] Source: http://caucascert.ge/files/ProdEN170718.pdf; checked on March 12, 2019.
[58] Source: http://caucascert.ge/en/about-us; checked on March 12, 2019.
[59] The director of Caucascert is also involved as a professor in the AMIES II project.

Temur Ugulava, from 2012 to 2017 Rooms Hotel Kazbegi has been led by a General Manager, who was interviewed for this study.[60] The aim was to find out more about the tourism sector in general in the Kazbegi region, as well about the specific demands of a luxury hotel and its guests and potential ways for cooperating with local inhabitants in the region.

Zeta Camp

Zeta Camp was opened in 2008 as a camp site above the village Juta at the bottom of the Chaukhi mountains. It was the first mountain camp site in Georgia and is open from March to October. Zeta Camp offers tents and rooms as well as a café and a bar. Besides the opportunities for hiking, various other activities for visitors are organized, such as horse riding, climbing, and bicycle or skiing tours. Zeta Camp was founded by a woman whose father is from the village Juta. She was awarded the “The Business of the Year” title in 2016 with Zeta Camp.[61] The interviewee, who is the founder and director, was not only selected due to her knowledge on Georgian mountain tourism and the Kazbegi region, but also due to her experience in implementing entrepreneurial activities in Georgia.

Goodwill

Goodwill is the first Georgian hypermarket chain. Besides offering Georgian products, it imports food and non-food products from Germany, the Netherlands, Italy, France, Bulgaria and Ukraine and has 300 corporate clients. It is famous for its meat products and confectionery and provides catering services. Around 250 products for gastronomy are manufactured by Goodwill itself. Besides retail shops in Batumi and Tbilisi, it also offers an online shopping service.[62] For the current study, the head of the quality department of Goodwill in Tbilisi was interviewed. The aim of the interview was to gather data on the requirements with regard to agri-food products, as well as on the demand for agricultural products from the Georgian population.

Interview situations

The expert interviews were implemented in Tbilisi in February 2016. Apart from the interviews with the head of the ACDA and the head of the quality department of Goodwill, all interviews were conducted in English language by the researcher herself. The two other interviews were implemented with the help of the Georgian project partner. In the case of the interview with the head of the ACDA, an assistant of the head of the ACDA was also present in order to translate the researcher’s questions from English to Georgian and the answers of the head of the ACDA from Georgian to English. The interview with the head of the quality department of Goodwill

[60] Source: https://roomshotels.com/; https://roomshotels.com/kazbegi/; all pages checked on March 12, 2019.
[61] Sources: https://zeta.ge/en/about-us; http://startupcompete.co/startup-idea/services/touristic-camping-zeta/62291); pages checked on March 12, 2019.
[62] Source: http://goodwill.ge/aboutus.php?lang=en; checked on March 12, 2019.

was implemented partly in English and partly in Georgian, with the help of the translation of the Georgian project partner.

Based on the agreement of the interviewees, all interviews were audio recorded. Except the interviews with the representative of Rooms Hotel and of Zeta Camp, all interviews took place at the offices of the organizations. The interview with the representative of Rooms Hotel Kazbegi took place at the Rooms Hotel Tbilisi and the interview with the representative of the Zeta Camp was implemented at a café in downtown Tbilisi. Nevertheless, this was not considered a shortcoming, since the researcher already knew both premises in the Kazbegi region from the pre-study.

In the majority of cases in which the interviews took place in the office of the interviewee, the atmosphere was quiet, there was only the interviewed person in addition to the interviewer in the room, and it was easy to talk and listen. However, when the interviews at the Ministry of Agriculture with representatives of the FAO were implemented, it was quite noisy as there were several people in the room who were not part of the interview. In the case of the interview with the representative of Zeta Camp at the café in Tbilisi the background noise also had a negative effect on the interview situation and the recorded data. When interviewing the president of the Georgian Farmers' Association, the interviewee seemed to be under time pressure, which led to a slightly stressful interview atmosphere.[63]

In the interview with the National Project Manager of a project for capacity building of the Ministry of Agriculture implemented by FAO, another person sitting in the same room was interested in the topic of the interview as well. As this person was also working for the ENPARD project and with the ACDA, which are both relevant for the current study, the researcher spontaneously decided to interview this person as well.[64]

While the majority of interviews took around one hour, three interviews only took around 30 minutes. In two cases the translation led to less detailed answers and was interrupting the natural flow of the conversation. In the case of the interview with the representative of the GFA, the short interview duration was probably due to the fact that the president of the GFA was under time pressure.

[63] Nonetheless, the interview provided valuable results and the researcher highly appreciates that the president of the GFA took the time for this interview despite being very busy.
[64] For this interview, the same interview guideline as for E5 was used.

4.3 Main Steps of the Analysis

This chapter contains a description of the types of analyses conducted for each of the different study phases. The analyses were conducted in relation to the objectives of the different study phases and in relation to the research questions presented in chapter 3.3.

Exploratory study

The analysis of the data of the exploratory study included an analysis of the notes the researcher took during and after the informal face-to-face interviews of the exploratory study in Tbilisi and the Kazbegi region. It included careful reading of the manuscripts and summarizing of the data. In addition, the photos which were taken during the exploratory study were analyzed. As one aim of the exploratory study was to find out more about the agri-food chain of the Kazbegi region, a basic mapping of the chain based on Springer-Heinze (2008) took place. In line with such a “value chain approach”, the researcher focused mainly on the specific actors and relationships that shape the performance and outcomes of the agri-food chain, including the activities and agents which are necessary to market products (compare Temu et al. 2014, p. 7 f.). A value chain approach was further employed, since it is considered to be „a powerful tool” that helps to identify hurdles of the value chain as well as beneficiaries and losers (Anderson 2018, p. 170). In order to contribute to mapping the agri-food chain of the Kazbegi region, the network map which had been developed with one interviewee was analyzed by the researcher after the exploratory study.

Focus group discussions and expert interviews: Structuring qualitative content analysis

A qualitative content analysis was applied to the text data of the focus group discussions and the expert interviews. As pointed out above, within the framework of qualitative content analysis various *procedures* exist for analyzing text data. The basis for most analysis procedures is the category system, and according to Berelson (1952, p. 147): “[…] a content analysis can be no better than its system of categories”. Depending on the development of the category system and the steps of the analysis, various forms can be distinguished.[65] The procedure chosen for analyzing the text data of this study is a *structuring qualitative content analysis*, following Kuckartz (2014a, p. 77 ff.; 2014b, p. 69 ff.), Schreier (2012) and (Schreier 2014, p. 3/18 ff.) and Mayring (2010, p. 92 ff. and 98 f.).[66]

In line with the basic idea of qualitative content analysis described by Mayring (2000, p. 2, 2015a p. 370), in the case of the structuring qualitative content analysis, the category system is

[65] For a detailed overview and description of the different types of analysis see for example Schreier 2012 and Stamann et al. 2016.

[66] Translated freely by the author from the German term “inhaltlich-strukturierenden qualitative Inhaltsanalyse” used in Schreier 2014. While Kuckartz also uses this term in Kuckartz 2014a, e.g. p. 77 ff., in the English version of the book (Kuckartz 2014b), he uses the term “thematic text analysis”. Mayring 2010 uses the term “inhaltliche Strukturierung”. According to Schreier 2014, p.5/18 all these forms correspond to what she calls “inhaltlich-strukturierenden qualitative Inhaltsanalyse”. Thus, the English version of this term, “structuring qualitative content analysis”, freely translated by the author, is used in this study.

also the core of the analysis and provides the basis to structure the data. In the case of a structuring qualitative content analysis, a central aim is the reduction of data. This is achieved through the systematic description of meaning by using a category system and selecting data according to the research questions and thus the content of interest. (Schreier 2012, p. 7f.).

Preparation of data for the analysis – Translation and transcription

The basis for a structuring qualitative content analysis is text data, which in the current study means transcripts of the conducted interviews. The focus group discussions, which were implemented in Georgian language, were first transcribed and then translated by a policy advisor of FAO Georgia. Being of Georgian nationality and fluent in English language as well, this person was suitable for the transcriptions and the translation. Furthermore, the professional background at the FAO was conducive for the task. The expert interviews, which were conducted in English language, were transcribed by a former student of Transdisciplinary Health Research at North-West University in South Africa. Due to this background, the transcribing person was familiar with qualitative research and transcriptions and the vocabulary of the study.

Since the aim was to receive a simple transcript which is easily readable, the following **transcription rules** were applied (taking into account several recommendations of Dresing et al. 2015, p. 23 ff.):

- The data is transcribed literally
- Dialect is approximated to standard language
- Informal expressions such as “it’s gonna be” remain as spoken
- No prosodic elements are included
- Non-verbal actions or emotions (e.g. laughing, shaking the head) are added in brackets
- Short pauses or interruptions or sudden thematic changes are marked by suspension marks “…” within a paragraph
- Longer pauses are marked by (…)
- Emphasized words are written in capital letters
- What is not comprehensible acoustically is marked with (inc.) for “incomprehensible”
- (?) is put after a word if it is not understood correctly or is not known
- Words or sentences at the end of a paragraph which are not ended or where speech overlaps are marked by / (if another person is talking afterwards)
- If someone starts speaking an extra paragraph is used; the next person’s statements are written in the following paragraph
- “I” is written for the interviewer
- Translations or explanations are added in brackets and in italics (e.g. *caraway)*

After receiving the transcriptions and translations of the focus group discussions and the expert interviews, respectively, they were proofread and corrected by the researcher. In this way a four-eye principle was applied. As an example, the corrections included the insertion of Georgian expressions such as words for Georgian food products or geographic locations which were not known to the transcriber and therefore were not correctly understood. These cases occurred in particular with the expert interviews, because the transcriber was not Georgian and thus not familiar with the specific Georgian expressions. However, in line with Kuckartz (2009, p. 85), only those quotations were corrected which were finally used in the text for the illustration of the categories and results. Therefore, some parts of the transcripts might still contain some mistakes with regard to orthography or punctuation.

Main steps of the structuring qualitative content analysis

The analysis of the text data was performed with the help of the qualitative data analysis (QDA) software MAXQDA. Though most of the structuring and analysis of the text data could also be carried out without software, applying software is of great help, in particular with regard to time constraints and precision. The following graph shows the main steps of the structuring qualitative content analysis of the text data, which was developed following the process models of Kuckartz (2014a, p. 78; 2014b, p. 70), Schreier (2014, p. 4/18 ff.) and Mayring (2010, p. 93 and 99).

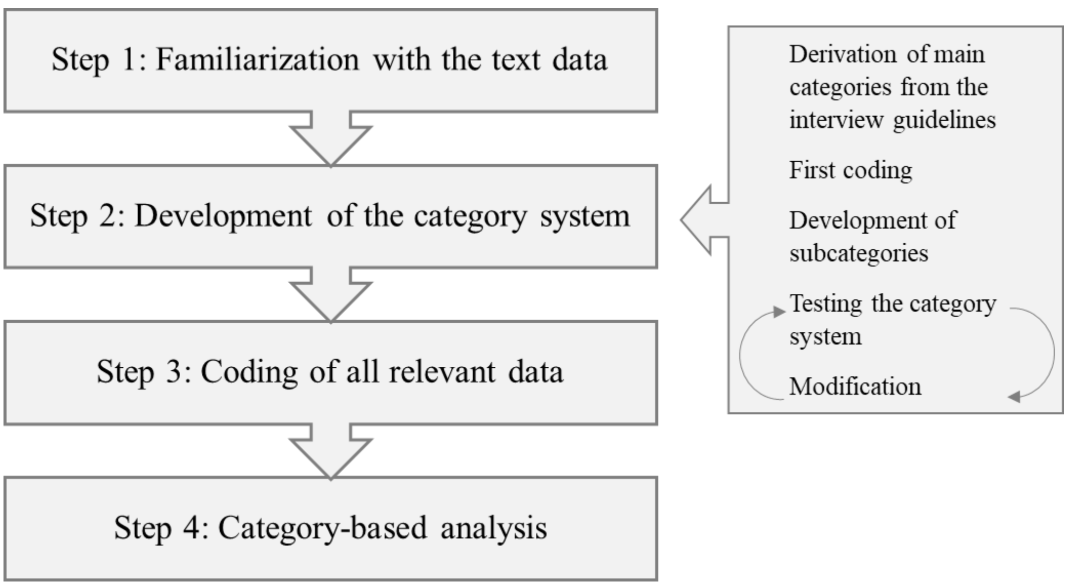


Figure 10: The main steps of the structuring qualitative content analysis

Source: Own depiction based on Kuckartz (2014a, p. 78; 2014b, p. 70), Schreier (2014, p. 4/18 ff.) and Mayring (2010, p. 93, 99).

Step 1: Familiarization with the text data

Firstly, the researcher became familiar with the transcribed data by reading the texts carefully in light of the research questions. To this end, with the help of the QDA software memos with comments or additional information were added to text (see e.g. Kuckartz 2014b, p. 50 f.).

Step 2: Development of the category system

In this study, the *category system* (also known as coding frame, see Schreier 2012, p. 59 ff.) as the "core" of the qualitative content analysis (Schreier 2014, p. 2), was developed by a combination of concept- and data-driven strategies (according to Schreier 2012, p. 89, Kuckartz 2014b, p. 71[67]). In the current case, the main categories were developed deductively based on the research questions and interview guidelines (concept-driven), while the subcategories were derived inductively from the text data (data-driven). As the categories refer to a specific topic of interest in line with the research interest, they can be defined as "thematic categories" (Kuckartz 2014b, p. 41).

After defining the main categories, the first coding of the text data took place (see more information below under *Step 3: Coding of all relevant data*). During this first coding, the text data of interest with regard to the research questions was attributed to the main categories. Afterwards, the subcategories were derived from the selected material. This was carried out by looking at the specific information that occurred in the text data attributed to the main categories and by then deriving subcategories according to the specificities which seemed to be relevant for the study (compare Schreier 2012, p. 60). In the following, the developed category system was tested by coding the data again after some weeks. Those parts of the category system which then no longer seemed to be adequate were consequently adjusted.

According to Kuckartz (2010, p. 204), most interviews which are based on interview guidelines contain two levels of categories. This also applies to the underlying category system of this study with six main categories and one level of subcategories. Table 7 shows the main categories and the respective subcategories of the category system which forms the basis for the analysis and the results presented in this study.[68]

[67] It must be taken into account that Kuckartz does not use the terms "concept-driven" or "data-driven" but instead uses the terms "inductive" and "deductive" for this type of development of categories (Kuckartz 2014b, p. 69 f.).
[68] As the category system is not only developed as a concept-driven approach but by a mixed concept- and data-driven approach, the category system could also be presented as a result; however, for the sake of the structure of this thesis it was decided to present it in this chapter.

Table 7: The category system[69,70]

No.	Main category	Subcategory[71]	Description
1	Agri-food chain	Bottlenecks in the agri-food chain	Bottlenecks and hurdles with regard to the agri-food chain; general, not product-specific
		Opportunities with regard to the agri-food chain	Opportunities and advantages with regard to agricultural production and marketing; general, not product-specific
		Marketing and delivery	Selling and buying of products: Location, actors, delivery processes, barter; relation of selling and own consumption, supply situation (*e.g. through shops and mobile markets*), marketing-relevant hurdles; general, not product-specific
		Other information on the agri-food chain	Historical situation of agriculture; support (*e.g. governmental grants, projects*); "regional branding"
2	Agri-food products	Beer	Product-specific characteristics, production and marketing of the specific local agri-food products Classification of products (not based on botanical definitions): **Beer:** "Beer" **Bread:** "Bread", Georgian bread: Mchadi (cornbread), Khachapuri (yeast dough filled with cheese), Khabizgina (Khachapuri filled with potato), Pkhlovani (Khachapuri with
		Bread	
		Dairy products	
		Fish (trout)	
		Fruits and berries	
		Herbs, tea and spices	
		Honey	
		Lettuce	

[69] Unless stated otherwise all categories refer to the Kazbegi region. Not all the bullet points/contents of the description of the categories occur both in the text data of the focus group discussions and the expert interviews. In some cases topics are only represented in one type of interview.

[70] Additional information on some categories: The subcategories of the main category "Agri-food products" are not based on botanical definitions but on colloquial expressions and the way the interviewees used the expressions and grouped the products. Potatoes, for example, in most of the cases were mentioned separately from all other products. In addition, potatoes are often eaten as a side dish and are not considered to be a type of vegetable. Since bread, in comparison to most of the other products, is a processed food product, it was decided to use an extra subcategory for it. The same applies to the subcategory of dairy products. As lettuce is a special crop and was also mentioned apart from other vegetables, related data is coded to an extra subcategory. Categories 4 and 5 are useful to get a more comprehensive picture of the situation and opportunities on site in the Kazbegi region. However, data is not described as detailed as in case of the categories 1 to 3 and can be considered an add-on for the analysis and interpretation of results. Category 5 includes official and informal cooperatives and general cooperation. Category 6 "Other relevant information" does not contain a subcategory, since it is a category in which other relevant data on the region is collected for the sake of completeness but without a need for more detailed specifications through subcategories.

[71] Note that in MAXQDA and the related documents of the analysis abbreviations of the category names have been used for reasons of clarity.

		Meat Potatoes Vegetables Other products	nettle), Shotis Puri (flour bread baked in a tandoor oven) **Dairy products:** Milk, (sheep and cow) cheese, Matsoni (similar to yogurt), sour cream, butter, Nadugi (fresh cheese with mint) **Fish:** “Fish”, trout **Fruits and berries:** “Fruits”, cherry plum, black berries, blackcurrant, sea buckthorn, strawberries, plum, apple **Herbs, tea and spices:** “Local herbal teas”, Alpine Rose (in Georgian Deka), Thyme (in Georgian Begkondara), medicinal plants, wild mint, caraway (in Georgian Dzira), Caucasian rhododendron, tarragon **Honey:** Honey **Lettuce:** “Salad”, lettuce **Meat:** Cattle, sheep, pigs, poultry, rabbits **Potatoes**: Potato, potato seed production **Vegetables:** Cabbage, carrot, beetroot, onion, garlic, beans, cauliflower, broccoli, pepper, cucumber, tomato, eggplant; information on greenhouse production and related technologies **Other:** Alcoholic beverages, non-food agricultural products (*e.g. Caucasian fir, wool, leather, hay, felt, enameled products*), information on products which are not produced in the region and have to be sourced from outside (*e.g. oil, sugar, flour*)
3	Linkages between the agri-food and the tourism sector	Relation of agriculture and tourism	Relation of agriculture and tourism, interdependency of both sectors (*e.g. development of tourism infrastructure might also lead to an increased demand for agricultural products*)
		Sourcing of agri-food products at hotels and guesthouses	Local and non-local products sourced by local hotels, guesthouses and restaurants, ways of sourcing the products (*e.g. contact to the producer, purchase and delivery, inspection of the products*), production location
		Requirements of the tourism sector with regard to local agri-food products	Requirements of local hotels or guesthouses (and one supermarket in Tbilisi) with regard to sourcing local agri-food products (*e.g. compliance with food safety standards, documentation*)

		Other hurdles with regard to linking the agri-food sector and tourism	Other hurdles with regard to linking the two sectors (*e.g. not enough products to sell to tourists, low level of professional knowledge on tourism services, lack of information for tourists*); not product-specific
		Ideas of linking the agri-food sector and tourism	Ideas and strategies of marketing and distribution of local agri-food products (*e.g. cooperative farmer shops, "local food tours"*); mainly examples from other regions, which might be suitable for the Kazbegi region as well
4	Organic production and special dishes	Certification	Certification procedures (throughout Georgia), characteristics of the region and of local products which are relevant for organic production; suitability of certain products for certification
		Role of local or organic products	Awareness of guests of hotels and guesthouses on local or organic products or products declared as organic; advantages for producers
		Special products and dishes	Dishes, plants and products typical in Georgia with special variations in the Kazbegi region
5	Cooperation	Pro cooperation	Advantages of cooperation (*e.g. reduction of costs, higher bargaining power, easier implementation of standards)* and supportive factors (*e.g. interest of agricultural producers, need for cooperation to meet certain requirements*)
		Contra cooperation	Hurdles (*e.g. mentality, lack of access to finance, understanding of how cooperation works*) and disadvantages (e.g. *imbalance of power among members of the cooperatives*) with regard to cooperation
		Role of trust	Information on the role of trust with regard to cooperation and in general in the region
		Situation of cooperation in Georgia and the Kazbegi region	Situation of cooperation in Georgia and the Kazbegi region, formal requirements and organizational structures, support projects
6	Other relevant information		General information on the region, infrastructure (*e.g. roads, internet, education situation*), reasons for (seasonal) migration, language skills, characteristics of the local population

Source: Own compilation.

Step 3: Coding of all relevant data

After all modifications and adjustments and the final determination of the category system, all relevant data was coded. This means that after carefully reading the interview texts, the text segments of interest for answering the research questions were assigned to the categories of the above-depicted category system. This process is the so-called coding, which corresponds to assigning snippets of text to card index boxes (Schreier 2012, p. 127). The data of the focus group discussions as well as the data of the expert interviews was coded according to the following rules.

Firstly, text passages with content which was not providing information on the research questions were excluded from the coding process. The segments which were of interest were selected according to units of meaning. Such text segments emerge during the coding process and are thus not determined before the coding, which is often the case in classical content analysis. The only formal criterion for segmenting the text in the underlying study was that a unit of coding/text segment of interest, should always consist of the whole sentence where the relevant data occurs (e.g. not only of one word). In contrast to classical content analysis with subcategories that exclude each other, in the framework of this study text passages could be assigned to more than one category. This corresponds to Kuckartz (2014, p. 72): "Because one text passage can include multiple topics, it is possible to assign it to multiple categories".

In line with Kuckartz (2009, p. 80), in cases where a person was asked for hurdles, disadvantages or other negative aspects and not only provided information on that, but also on how to improve the negative aspects, these suggestions for improvement were also attributed to the same category. It is also often recommended to code similar expressions of one person only once (e.g. Kuckartz 2009, p. 80). However, this was not applied in this study, as this might be a too strong intervention of the person who is coding. In such a case, the coder would have to decide which expressions are similar and which are not. This could be difficult particularly if the data is translated before the coding, what applies to the focus group discussions.

The development of the category system and coding was carried out by the author only and not by a team. Thus, following the recommendation of Schreier (2012, p. 198 f.), the material was re-coded several times[72] after different periods of time. This led to a step by step modification of the category system (see above *Step 2: Development of the category system*) and subsequently also to an adjustment of the coded segments. For example, taking into account the information of Kuckartz (2010, p. 66) that the coded text segments are often too short to understand the meaning of the segment detached and independently from the context, in an additional coding round it was checked that the coded text segments could be understood without additional explanations. Based on this hint, several coded text segments were adjusted and are finally longer than in the first round.

[72] For most parts three to four times.

Step 4: Category-based analysis

In order to implement the category-based analysis (see Kuckartz 2014b, p. 84 ff.), first the main categories and their subcategories were analyzed. To this end, a text retrieval was carried out (see also Kuckartz 2010, p. 109 ff.). The text retrieval shows which text segments have been assigned to the respective categories. In addition to the text retrieval, with the help of MAXDA's code matrix browser, data on the frequencies of the codings was provided, showing the number of codings per category as well as the number of codings per person or group of persons and visualizations of that. However, though it might be interesting to compare the frequencies of the categories, the frequency should not be equated with the importance of a category (Kuckartz 2010, p. 117).

After analyzing the main categories and their subcategories, in a second step the relationships *between* the categories were analyzed (compare Schreier 2012, p. 225 ff.; Kuckartz 2014b, p. 85) in order to look for co-occurrences of the coded data (Schreier 2012, p. 228). With the help of MAXQDA's code relation browser (Kuckartz 2010, p. 194 f.), which can also visualize the intersections of categories, or by generating a complex coding query, intersections and overlappings can be shown (see e.g. Kuckartz 2010, p. 113, 163 ff.).

MAXQDA-queries for the focus group discussions:

- Text retrieval for the whole category system
- Frequencies of main and subcategories per focus group (see graph chapter 4.4.2)
- Frequencies of main and subcategories per focus group participant
- Visualization of the frequencies for focus groups and categories
- Visualization of the frequencies for focus group participants and categories (see graph Annex 3)
- Co-occurrence of (sub)categories[73] with the help of the code relation browser (see table Annex 3)

MAXQDA-queries for the expert interviews:

- Text retrieval per category system
- Frequencies of main and subcategories per expert (see graph chapter 4.4.3)
- Frequencies of main categories per expert
- Visualization of the frequencies
- Co-occurrence of (sub)categories with the help of the code relation browser (see table Annex 3)

[73] Please note that in MAXQDA the term "code" is used instead of "category", as they also speak of the "coding system". Since in the current study the term "category system" is used, this implies also that here the co-occurrence of "categories" is addressed, although in MAXQDA the query is on the co-occurrence of "codes".

Based on these queries, the data was analyzed in detail. Furthermore, quotations from the text data were selected and the content was paraphrased and summarized.

4.4 Results of the Study Phases

The results of the three study phases (exploratory study, focus group discussions, expert interviews) are presented separately in chapters 4.4.1, 4.4.2 and 4.4.3. The results are condensed in chapter 4.5. The exploratory study is presented by summaries of the collected data in the form of continuous text and a graph depicting the agri-food chain. In addition, pictures showing the socio-economic situation as well as the situation of agriculture and tourism in the Kazbegi region are provided. The results of the focus group discussions and the expert interviews are presented according to the category system following Schreier (2012, p. 219 ff.), since the focus of this study is not on obtaining an in depth-picture *of the cases* (the interviewees), but on the data gathered from the interviewees with regard to the research questions, which is structured via the category system. For this category-based presentation of the data, per category, continuous text which describes the results is combined with original quotations from the interviewees, which contributes to illustrating the context. In addition, the absolute frequencies of the codings per category are provided by a graph with stacked columns covering all categories as well as by frequencies in the continuous text in some cases (Schreier 2012, p. 232).[74] Additional figures are provided in Annex 3.

In the case of the expert interviews, results are not only described by continuous text but – for most of the categories – text matrices with selected quotations are also provided, following the recommendation of Schreier (2012 p. 222). The quotations of the text matrices are further paraphrased (following Mayr-Birklbauer 2009, p. 817). If no characteristic citations are available or if the number of codings is low, also in case of the expert interviews, selected quotations are only provided within the continuous text.

In the case of the focus group discussions, the reason for only presenting the results in the form of continuous text is the fact that the number of codings and citations is much lower than in the case of the expert interviews. Moreover, as the citations are already translated from Georgian to English, further paraphrasing might have led to additional errors and biases with regard to the meaning of what had been said.

All results are based on the answers of the interviewees and are not yet assessed for their truth and validity, or evaluated or interpreted by the researcher in this chapter on the results. This also applies to contradictions in the data. Furthermore, just as in Hüller et al. (2017, p. 3), linguistic errors which occur in the used quotations have not been corrected in order to remain close to the original statements and meaning.

[74] Only absolute frequencies will be presented, as percentages do not provide much information in cases where the total number of codings is small (Schreier 2012, p. 235).

4.4.1 Exploratory Study

As pointed out in chapter 4.2.1 one aim of the pre-study was to find out more about the socio-economic situation, agriculture, tourism and the relationship of agriculture and tourism in the Kazbegi region. The second aim was to generate the research questions of this study based on the findings of the exploratory study. In addition, the objective was to identify interview partners for the main study and to pre-test the network mapping approach.

Socio-economic situation in the Kazbegi region

According to the head of the Sakrebulo[75] of the Kazbegi Municipality, there are approximately 5,000 people living in the region.[76] However, during winter time only approximately 3,000 people remain in the region. This type of seasonal migration was mentioned by several interviewees. For example, the head of the village Kobi reported that out of 100 inhabitants in summer, only 20 to 25 stay in the village during winter time. According to an inhabitant of Sioni who works for the municipality's representation of the Ministry of Agriculture, 70 out of 200 people stay in Sioni during the winter months. In Tsdo, only two people remain in the village during winter time; however, it also must be taken into account that during summer time only 13 people live in the village. According to a group of agri-food producers interviewed in the village Kanobi, one reason which enables people to leave the region for some months is that most of the locals have additional apartments in Tbilisi. In general, as shown by the statements of the interviewees above, the number of local inhabitants of the villages varies considerably. According to the head of the Sakrebulo of the Kazbegi Municipality, some villages are even totally depopulated and abandoned (See pictures 1 and 2, Annex 4).

As stated by the head of the community Goristsikhe, one of the main problems of this community is unemployment. The head of the community Sno also provided the information that only approximately 20% of the local population is permanently employed. This was confirmed by the statement of an inhabitant of Sioni, who indicated that around 80% of the village's population is unemployed.

As pointed out by the head of the community Sno, the largest employer in the region is the state, and employed people often work as teachers or nurses. According to the head of the Sakrebulo of the Kazbegi Municipality a large proportion of the employed people also work as state and border guards. This interviewee as well as the head of the community Goristsikhe furthermore provided the information that a large proportion of the population live on their pension.

Agricultural production

According to the interviewees, the main economic activity in the region is agriculture, which is carried out as self-employment. As described by an interviewed agronomist, the main

[75] The Sakrebulo is a local council. It is a "representative body of local self government" (Deutsche Forstservice GmbH and AGEG Consultants eG 2010a, p. 124).
[76] At the time of the interview in July 2014.

agricultural activities in the Kazbegi region are livestock husbandry, with a focus on sheep and cattle, and potato growing. This was confirmed by other interviewees. With regard to livestock farming in particular, cattle and sheep are kept. However, according to the interviewed agronomist, the number of sheep has decreased tremendously since pastures on Russian territory are no longer available to Georgian farmers. As described by a livestock farmer from the village Akhaltsikhe, the head of the community of Kobi and the group of agri-food producers in Kanobi, currently the main source of income is the sale of live cattle in autumn. As reported by a group of small-scale agricultural producers from Tsdo, traders come to the region and buy cattle to subsequently sell the live animals in Azerbaijan. In addition, potatoes and cheese are sold. In rare cases, trout is bred in local rivers, as was shown for example by a producer in Sno. (See pictures 3, 4 and 5, Annex 4).

Although a part of the locally produced agricultural output is sold, the owner of a guesthouse in Gergeti provided the information that a large share of production is used for own consumption. According to the head of the community of Sno, vegetables in particular are mainly produced for own consumption in small vegetable gardens close to the houses. This is in sharp contrast to vegetable production in former times, when vegetables where produced in greenhouses for commercial purposes and sold to Russia, which was pointed out by the head of the community Goristsikhe (see picture 6, Annex 4).

The interviews also provided the information that processing is mainly carried out by the agricultural producers themselves. This applies for example to meat and dairy products, as there is neither a slaughterhouse nor a milk collection center or dairy processing facility in the region. Another example of processing by the producers themselves is the extraction of honey from honeycombs. In addition, as was shown to the researcher by beekeepers in Kanobi in the course of the exploratory study, the producers themselves package the honey in jars. In the case of live animal exports or sales of seed potato for example, the processing takes place outside of the region. The delivery of products to the final consumers or the final selling points is either carried out by the producers themselves or by traders. As the exploratory study revealed, the production and processing are often done with outdated equipment and techniques. (See pictures 7 and 8, Annex 4).

According to a group of agricultural producers in Tsdo, one reason for not investing in adequate equipment is the lack of access to finance. Furthermore, as pointed out by a market-oriented farmer from Sno, the producers would also need advisory to improve their farming skills.

Provision of food products

According to a local entrepreneur who owns a restaurant in Arsha, in addition to food products produced by themselves, people either buy food products in local shops or from traders from other regions who visit the Kazbegi region. As described by the head of the community of Goristsikhe, there are only few shops in the village which are moreover hardly operational. With regard to the origin of the food products, the owner of a shop in Goristsikhe stated that almost all products offered at the shop are from Tbilisi. While the head of the Sakrebulo of the Kazbegi Municipality stated that in every village of the Sakrebulo there is at least one shop, according to interviewed people of the villages Kanobi, Kobi and Tsdo, in these villages there are no shops at all and people thus regularly buy from traders. When buying from traders, in kind exchange also takes place. (See pictures 9 and 10, Annex 4).

Relations in agricultural production

The network mapping (see chapter 4.2.1) that had been conducted with one market-oriented farmer from Sno shows some of the relationships that exist when producing and selling agricultural products. While input for agricultural production is mainly procured outside of the region from people who do not belong to the family of the farmer, a high proportion of relationships do exist with relatives of the farmer. For example, the farmer sells seed potatoes to cousins in the local area; in return the interviewee receives dairy products from them. A part of the agricultural output is also provided free of charge to friends and relatives outside of the region. Nevertheless, another part of the output is also sold to traders outside of the region, and seed potato are sold to potato growers in the region who are not part of the family of the farmer.

Tourism

In addition to agriculture**,** several interviewees mentioned tourism as an important economic activity in the region. Depending on the village, income from the tourism sector plays a more or less important role with regard to income generation. For example, according to an SME expert who had been involved in the USAID NEO project, in Stepantsminda tourism was the most important value chain followed by livestock farming and beekeeping. In this village, as well as in Gergeti, several hotels, guesthouses, restaurants and cafés are visible. Also in Juta, according to the owner of Zeta Camp, the local population’s income mainly derives from providing services to tourists. (See pictures 11, 12 and 13, Annex 4).

As described by the head of the community of Goristsikhe, no tourism exists in Goristsikhe due to the distance of the village from the highway. Moreover, there are no guesthouses, restaurants or tourist activities offered. This situation is similar in several villages in the valley of Sno as well as in Kobi, Kanobi, Pkhelshe, Sioni and Tsdo. While in Goristsikhe there is at least internet connection available, in the village Kobi there is not even a telephone line and the linkages to tourism are very scarce. Also in the villages with tourism, such as Gergeti, the service level is very low, as was pointed out by the owner of a guesthouse in this village. (See pictures 14, 15 and 16, Annex 4).

Market for local agri-food products

As stated by several interviewees, hotels, guesthouses, cafés and restaurants in the Kazbegi region also offer their guests some local agri-food products as well as typical local dishes (see picture 17, Annex 4).

Small guesthouses also use their own products from their vegetable gardens close to the house to prepare food for their guests, e.g. jam. Bigger guesthouses and hotels usually do not have their own products and source them from producers inside or outside the region. However, the inconsistency in the available volume as well as in the quality of the products are typical hurdles with regard to sourcing products locally. In addition, food safety is another hurdle, in particular with regard to local milk or meat; for this reason, these are bought in Tbilisi. In order to have a consistent quality of animal products, the owner of a restaurant in Arsha recommended the installation of a processing facility for meat in the region.

Additional interviews with representatives of supermarkets, the bazaar and a trading company in Tbilisi provided similar results. According to the representative of the Goodwill hypermarket, no products from the Kazbegi region are sold at Goodwill since the small-scale individual agri-food producers cannot consistently supply the quantity needed and do not have an adequate quality assurance. A representative of the bazaar in Tbilisi also stated that no products from the Kazbegi region are sold since the amounts which are produced are neither enough nor constant. However, this person also noted that with some support, a high quality of products could be produced in the region. According to a representative of the trading company Ecofarm, one of the main problems with regard to agriculture in the Kazbegi region is the lack of management skills. Nevertheless, the interviewee also stated that the quality of agri-food products from the Kazbegi region would be good. This company was also buying lettuce from the Kazbegi region and selling it to final selling points in Tbilisi, e.g. to the fast food restaurant Wendy’s or the hotel chain Holiday Inn.

Linkages of agriculture and tourism

Although several problems with regard to sourcing local products were mentioned by the interviewees of the exploratory study, they also provided information in favor of marketing local agri-food products. In particular tourists who come to the region seem to be interested in local agri-food products, as was described by the owner of the Mountain Travel Agency. In addition, as described by the owner of a guesthouse in Stepantsminda, some visiting guests are also interested in the process of producing agricultural food, such as the milking of cows, producing cheese, as well as preparing local or Georgian dishes, e.g. Khinkali. One interviewee also had the idea to link their own agricultural production, in this case trout farming in a river, to tourism by building a restaurant for tourists close to the river or even create a lake for trout fishing.

The basic agri-food value chain

The information from the data of the exploratory interviews on agricultural production and marketing is summarized in the following chart of a basic agri-food value chain ranging from input supply to consumption.[77]

[77] It must be taken into account that this graph only reflects the basic/typical relations that exist. For example, it does not show the rare cases where an agri-food producer brings products to selling points outside of the region him- or herself. This graph also does not reflect the export of live animals where the processing and packaging only takes place after transporting the animals to their places of destination. Please also note that the size of the forms related to the actors or the consumption does not reflect any real shares.

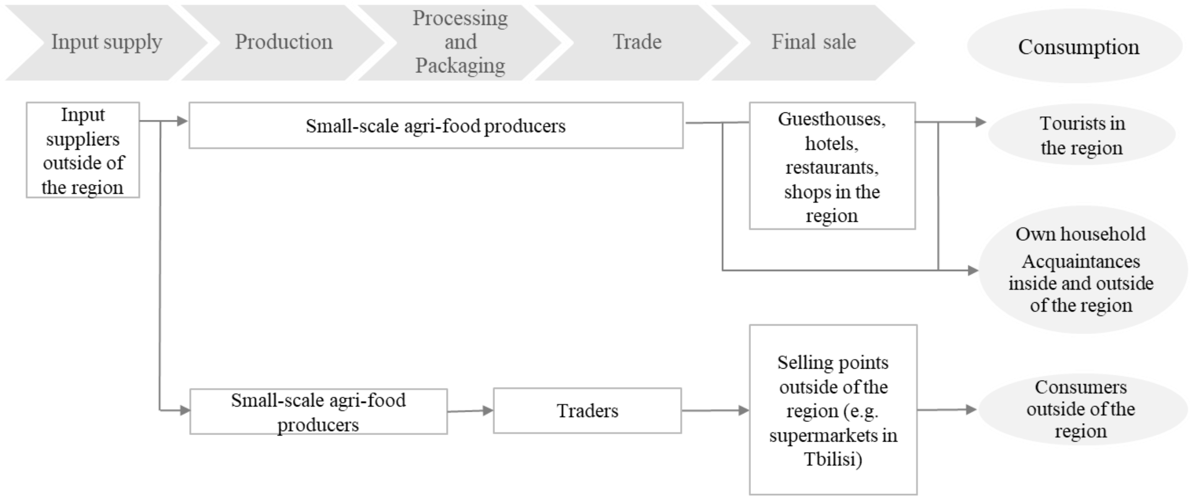


Figure 11: The agri-food value chain

Source: Own depiction following Springer-Heinze 2008.

Generation of research questions

As the exploratory interviews not only provided information on agriculture and tourism as the main economic activities in the region, but also initial insights into potential linkages and hurdles of linking agriculture and tourism, the generated research questions focus in more depth on topics relevant for linking agriculture and tourism. For a detailed description and motivation of the research questions and the underlying research approach, see chapter 3.3 on the research gap as well as the preceding chapters. As pointed out in chapter 1.2, although the research questions were generated only *after* the field study, they are presented in chapter 3.3 for the sake of clarity.[78] Presenting the research questions in this section 4.4.1 and not beforehand in chapter 3.3 would have left the reader for a long time without thorough knowledge about the exact aim of this study. Although it would be more realistic to present the research questions only in this chapter, it would be difficult for the reader to read and follow the study without knowing the research questions before this chapter (compare Kruse 2015, p. 628 ff.). Thus, as explained by Kruse (2015, p. 629), this “smoothed” structure is used in order to make the study more easily readable, but it also has the disadvantage that the research questions are presented before describing the implementation and results of the study phases, although they actually emerged in the course of this process.

Identification of potential interview partners for the main study

Another aim of the pre-study was to identify interview partners for the main study, encompassing the participants of the focus group discussions and as well as interview partners

[78] However, other options would have been possible as outlined in Kruse 2015, p. 630 ff.

for the expert interviews. As this is part of the preparation and implementation of the respective study phases, these results are presented in chapters 4.2.2 and 4.2.3.

Pre-test of network mapping

Although the networking mapping provided some basic results with regard to the business relationships in the Kazbegi region which are presented above, the result of the pre-test of the actor mapping was to not apply it again within the framework of this qualitative study. Since the network mapping thus did not form a substantial part of this study and the results, the detailed reasons for not using the approach are already presented in chapter 4.2.1.

4.4.2 Focus Group Discussions

On the following pages, the results of the focus group discussions are presented for each category with continuous text and selected quotations. As the focus group discussions were conducted in Georgian, the citations presented here are translations of the original statements. Due to this fact, the citations might not sound as natural as in the case of the expert interviews, which were conducted and transcribed in English.

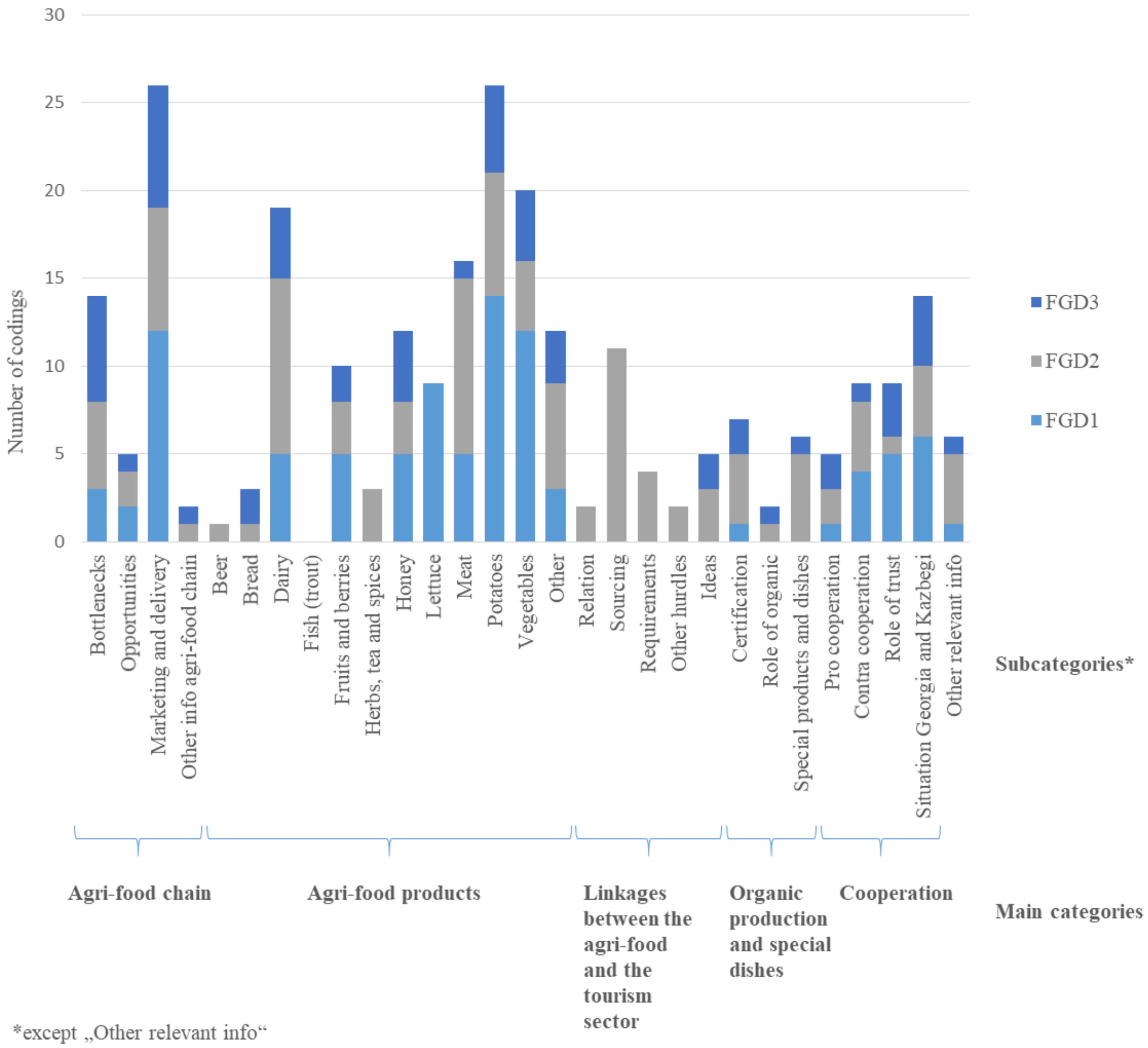


Figure 12: Number of codings per (sub)category of the focus group discussions

Source: Own depiction based on the data of the focus group discussions.

In some cases information on the number of codings is added to text. These frequencies are also depicted in the graph above, with the y-axis showing the number of codings and the x-axis the subcategories and one main category “Other relevant info” which has no additional subcategories. In addition, in Annex 3 a graph on the frequencies per main category per participant is provided, as well as a table showing the co-occurrences of categories.

Category 1 Agri-food chain

47 codings can be attributed to the main category "Agri-food chain". While 42 codings are attributed to the subcategory "Bottlenecks", only 5 are attributed to the subcategory "Opportunities".

Subcategory 1.1 Bottlenecks in the agri-food chain

The participants of all three focus group discussions – market-oriented farmers (FGD1), tourism sector representatives (FGD2) and small-scale agri-food producers (FGD3) – contributed to the identification of bottlenecks in the agri-food chain in Kazbegi. In FGD2 and FGD3 it was mentioned that the harsh climate and the long winter affects the production of local products as well as the supply of external products: *"The climate in Kazbegi is severe"* (2_FGD2[79]). Firstly, the cold winter has a negative effect on the production output; secondly, in winters with lots of snow the roads to the region are also closed and thus the import of food products for the local population is being hindered: *"It's difficult for those vehicles by which goods are exchanged to drive here during winter months, because the roads are blocked. That's when we feel the shortage of products but mainly we are accustomed to live with our supplies"* (1_FGD3).

Hence, during winter time in particular the local population depends on their own products. In addition, according to members of FGD3, agricultural production is negatively affected by the following factors: "*The first issue is land scarcity. The second is unavailability of the equipment to cultivate an uncultivated land and there is no opportunity for us to rent it, if we do have small loans (sighs) or something like that it would be great*" (1_FGD3). Technical equipment for drip irrigation systems and a refrigerated vehicle were mentioned as being desirable. As remarked by a participant of FGD3, due to the low amount of agricultural output there is also not enough produce to be marketed (4_FGD3). Moreover, the lack of warehouses negatively affects the marketing of products (see category 1.3 below).

The participants also mentioned that information and experience sharing as well as assistance with regard to production should be improved. Furthermore, current business relationships are only informal and the wish for regulation and legal underpinning was expressed.

Subcategory 1.2 Opportunities with regard to the agri-food chain

According to one participant of FGD2 the quality of local agri-food products is very good: *"In this region the products are not versatile but all of them are of a high quality"* (1_FGD2). One of the market-oriented farmers affirmed that the local products are in demand: *"There is a big demand on our products, provided there is good harvest"* (3_FGD1). This participant also

[79] 2_FGD2 stands for participant 2 of FGD2. n_FGD1, 2 or 3 stands for participant n of FGD 1, 2 or 3.

mentioned that the demand even increases. According to one of the small-scale agri-food producers (2_FGD3), with additional financial support the amount of the local products could be increased.

Subcategory 1.3. Marketing and delivery

As described by some focus group participants, food products are either bought at local markets and grocery shops, at the houses of other producers, or from traders who come to the villages. The traders bring products which are either not or only rarely available in the region and the producers exchange their products for these products, e.g. local cheese is exchanged for fruit: *"Basically we buy them in markets; it depends: sometimes they bring here products with mini buses and we buy from them; sometimes we exchange something on cheese"* (3_FGD1). This shows that barter is still prevalent in the region.

Nevertheless, there are also problems associated with the exchange of products with traders. As mentioned by one participant of FGD2, the visiting traders have better bargaining power to pay lower prices to the small-scale agri-food producers than if they brought their products to the markets themselves: *"Then fruit distributors arrive to our village […] who are well aware of trade rules. They can influence peasants in every possible way. If the peasant sells me cheese for 8 GEL, but the price is different when they trade with the arrived distributors. They exchange cheese for various products for 4-5 GEL and more than that, distributors' products are overpriced. So, the peasants bring down the prices and lose much"* (5_FGD2). In addition, a participant of FGD1 remarked that they also had relations with traders who turned out to be fraudsters. In contrast to that, one participant of FGD3 mentioned that they have good relations with the traders who visit them and can even tell them *"[…] to bring some products here and they do it"* (2_FGD3). One participant of FGD2 also added that it was very time consuming to go to the people and buy at their houses, as they might not be at home. With a special location for buying and selling products this hurdle could be overcome (2_FGD2).

Two members of FGD1 explained that they are trying to supply the local population with their products. Among their clients are also local hotels, such as the Rooms Hotel. One of them described how they attempt to start business relations: *"I will approach some people and tell them that I have these particular products but don't have the products they own. I establish contacts with them. I'll tell them that I have this and will you buy it at this price? – if you don't buy it, I'll find other people"* (3_FGD1). In some cases, the agri-food producers also bring their products to Tbilisi themselves or export it to Russia.

According to participants of FGD1 and FGD3, there is no deficit of food products in the region in times when the buyers have enough money. As mentioned above, it is only during winter time, when the roads are blocked by the snow and traders cannot access the region, that the local population depends on its own products. In this regard, also the lack of warehouses in the region was mentioned: *"Warehousing is a great problem"* (4_FGD1). However, the lack of warehouses is a restricting factor not only with regard to own consumption, but also with regard to selling products, as there is an oversupply at the time of the harvest and prices are thus very low. This was mentioned by one of the participants of FGD1, the market-oriented farmers.

One of the participants of FGD2 explained that with regard to increasing the production and marketing of local products, legal and documentation requirements might also be a hurdle for the farmers: *"However, in order to sell the local products you need to gather a lot of documents. Actually, this law is oriented to support imported goods and not local ones produced by peasants"* (5_FGD2). This participant also pointed out that consultancy with regard to marketing of products could be helpful: "*We need practical advice. We actually have gold but cannot sell it (is laughing)"* (5_FGD2).[80] In addition, due to the low amount of arable land, there is not always enough output to be marketed: *"We do not have enough land to produce something and then sell it, it is enough for our families"* (4_FGD3).

Subcategory 1.4 Other information on the agri-food chain

Several small-scale agri-food producers of FGD3 stated that during former times in the Kazbegi region, many people were involved in greenhouse vegetable production: *"[...] most of the families had greenhouses"* (1_FGD3).

They also mentioned that people collaborated when transporting products to the markets in order to save transportation costs, e.g. one person drove the harvest of two or three families to the markets. They also exported their output to Russia.

In the framework of FGD2 it was discussed that the ancestors of today's local population already produced the same products as today. Therefore, as stated by a participant of FGD2: *"We should not invent a wheel. Technologies should be improved, nothing else"* (5_FGD2).

Category 2 Agri-food products

In total 131 codings are attributed to the main category "Agri-food products". Out of this, most of the codings are included in the subcategory "Potatoes" (26 codings), followed by "Vegetables" (20), "Dairy products" (19) and "Meat" (16).

Subcategory 2.1 Beer

Two members of FGD2 reported that they have beer from different areas such as Mokhevian beer, Ossetian beer or Khevsurian beer, but also a local beer is brewed at Easter time. According to them, their attempt to brew beer themselves was successful (5_FGD 2). However, they have to use and buy hops from other areas, as the local hops are not as good and have a different flavor. In order to sell the beer, different methods of advertising might be helpful, such as via the internet or television. As noted by the participants, it should be emphasized in particular that local beer is an organic product.

[80] There is some overlapping of the category "Bottlenecks" and "Marketing and delivery" (in 5 cases of coding, see appendix), which could be an indication that in particular in the field of marketing problems are faced.

Subcategory 2.2 Bread

Flour for bread is not produced in the region. However, bread itself – though baked with flour from outside of the region – is often home-made. In addition, the Georgian dish Khachapuri, which is a type of bread, and its variations (e.g. Pkhlovani with nettle) are prepared in the region.

Subcategory 2.3 Dairy products

According to the participants of all three focus group discussions, almost every household in the region owns cattle: *"In Kazbegi there is not a single family without a cow"* (5_FGD2). Besides raw milk, according to one small-scale agri-food producer of FGD3, they produce cheese, butter and cottage cheese in the region. For other products such as sour cream, special equipment would be needed: *"For example, in order to produce sour cream you need mini plants and processing material – which we do not have"* (6_FGD3). Hurdles with regard to processing were a general observation, and one of the market-oriented farmers also mentioned that milk collection facilities would be needed (4_FGD1). One member of FGD3 also noted that more official procedures and formal documentation would be important in order to be able to comply with Georgian law and also European standards. However, one of the members of FGD2 criticized this, stating that it might lead to a situation where *"[…] peasants won't be able to sell the cheese, he won't be able to sell it even to the neighbor and will consume it only at home"* (2_FGD2).

For the marketing of milk or dairy products, it must also be taken into consideration that the quantity of milk produced varies greatly throughout the year, which also affects the prices: *"[…] when there is a milking season we have much cheese and the price decreases; but during the no lactating (dry) period there is a shortage of cheese and apparently prices go up"* (5_FGD2). During the dry period the local population also buys cheese in Tbilisi or from traders who come to the region.

According to one of the small-scale agri-food producers, due to the high quality of the local grassland the quality of local milk is also good. Representatives of the local tourism sector also mentioned that they buy cheese from the region. However, as pointed out by one of them: *"We have to look for several suppliers here, in this region. One supply cannot meet your demands"* (5_FGD2). Besides this, the interviewees also were open to innovations. For example, one of them mentioned a visit to a cheese festival in order to get information about innovations, while another person explained that the products offered should also be adapted to the demands of the tourists. In this regard, in order to facilitate the transport of local products to the places of origin of the tourists, one person suggested: *"We can make small wheels of cheese"* (1_FGD2), which is in contrast to the huge cheese loafs that are currently mostly offered.

Subcategory 2.5 Fruits and berries[81]

As remarked by one interviewee of FGD3, in the region *"[…] there is a shortage of fruit, because the fruit does not grow here"* (1_FGD3). However, certain varieties are grown in the region, e.g. strawberries and plums and apples in small amounts. Three of the market-oriented farmers mentioned that they are involved in strawberry growing. One of them also explained that the strawberries are marketed: *"[…] I will have strawberries in excess, and I'll sell them as well"* (3_FGD1). According to another participant the strawberry seedlings were provided through the USAID NEO project. One representative of the tourism sector was also convinced of the uniqueness of the locally produced strawberries.

Three participants of FGD2 have experience in marketing sea buckthorn, which, according to them, is available in large quantities in the region. One of them sold it at his house, while another member of the group provided information on the hurdles related to marketing the plant: *"We stopped this production because the law was changed. We should have a special building and conditions for production. We did not have it and that's why we stopped it […]"* (2_FGD2). In addition, this person was convinced that the product would be more suitable to be marketed to tourists than to local inhabitants. However, as sea buckthorn is also a medicinal plant, according to the interviewees there would be a huge demand for it, in particular from Russia: *"It's very healthy and there is a great demand for it. Do you know that Russians pay greater attention to healthy food and they know how useful sea buckthorn is"* (5_FGD2).

Subcategory 2.6 Herbs, tea and spices

One of the members of FGD2 mentioned that in the region tea is prepared from local herbs and medicinal plants. According to this person *"There are a lot unique medical plants"* (2_FGD2); however, due to the possible effects, only knowledgeable people should use such plants for tea. Another person of this group also noted that the local tarragon would be very tasty.

Subcategory 2.7 Honey

According to members of FGD1 and FGD2, the quality of the local honey is very good, and it is a well-known product: *"It's very good honey, of a high quality"* (1_FGD1); *"Kazbegian honey is famous"* (2_FGD2). In addition, one of the market-oriented farmers mentioned that the local honey would even be healthy. As stated by several market-oriented farmers and small-scale agri-food producers, due to its popularity, local honey is sold directly after production at a good price. According to one interviewee of FGD2, even for the following year: *"The previous year we already sell everything for the next year because there is small amount of it"* (4_FGD2). As stated by one representative of the local tourism sector, tourists are also interested in the local honey.

[81] As in the course of the focus group discussions no data on the category "Fish (trout)" (2.4) was gathered, the results continue with category 2.5 here.

One of the market-oriented farmers also noted that compared to other agricultural activities, a relatively high investment in apiculture is required: *"Do you know why honey is not number one product? You can buy one hive with the bees for 400 GEL, won't you? But 300 GEL is actually needed for sowing lettuce at 400 square meters of land, you even won't need that much"* (3_FGD1). In another discussion, one of the small-scale agri-food producers added that the lack of funds not only restricts the number of hives which can be bought, but also the access to new technologies: *"I've just learned about innovations in apiculture but we do not have access to these new technologies due to the lack of the financial resources"* (4_FGD3). Another small-scale agri-food producer mentioned that advice on how to produce different bee products would be helpful.

Subcategory 2.8 Lettuce

Data on lettuce growing and selling was only provided by the participants of FGD1, the market-oriented farmers, who not only grow but also sell lettuce. The main hurdle in this regard is the lack of a refrigerated transport vehicle, as mentioned by one of the participants: *"There are no problems in selling; the main problem in selling lettuce for us is the lack of a refrigerating machine"* (3_FGD1). However, the plan is to expand the business relations for lettuce: *"The contacts with buyers are being established as well. When you have more buyers, you'll produce more products and have more income"* (3_FGD1).

Subcategory 2.9 Meat

According to one of the representatives of the local tourism sector, the main products of the Kazbegi region are cheese and meat (5_FGD2). As reported by one of the market-oriented farmers, cattle are fattened on mountain pastures during summer and then slaughtered in autumn. The surplus which is not needed for the family is sold: *"In summer I plan everything, my cattle are in pastures, in the mountains and in the autumn I slaughter them. So, I have my own meat at home. If I have more meat than I planned to, than I sell it"* (3_FGD1).

As stated by two of the representatives of the local tourism sector one main problem for the cattle breeders are the rules set by the Food Safety Agency of the Ministry of Agriculture and the law: *"If you take into account every law, a peasant won't be able to sell anything and he has the cattle in vain"* (5_FGD2). However, another participant of this focus group discussion was in favor of proper documentation, e.g. certificates issued by veterinarians. Interestingly, according to this interviewee, in former times there had been a slaughterhouse in Gergeti where a veterinarian had also worked.

The representatives of the local tourism sector also provided the information that they source meat from the region. However, they only buy from the producers who they trust and know that the cattle is *"[...] not infected and not fallen from the cliffs"* (3_FGD2).

Subcategory 2.10 Potatoes

According to two small-scale agri-food producers, there is a long tradition of potato growing in the region, and almost everyone in the region is involved in this activity. The output is often used for the own consumption of the producers and their families. In most of the cases the own production is sufficient to satisfy the household's demand and usually there is no need to buy other potatoes in addition, except in rare cases shortly before the next harvest starts. In cases where there is a surplus the potatoes are also sold, and according to one of the market-oriented farmers there is *"No problem with the selling of potatoes"* (1_FGD1). This is confirmed by the statement of another member of FGD1: *"As I previously said, market comes to us, (laughs) and when they tasted our potatoes, they told us that they had never eaten such tasty potatoes"* (5_FGD1). One of the small-scale agri-food producers provided a similar description: *"We mainly sell potatoes. Our potatoes are so praised in Tbilisi, that consumers don't even ask the price"* (1_FGD3). Thus, potatoes are not only sold and consumed in the region but also in the capital. The high quality of potatoes was also underlined by other interviewees.

As mentioned by two of the market-oriented farmers, one of the main problems with regard to potato growing and marketing is the lack of warehouses to store the potatoes after harvest, which would be needed: *"I'd like to have a cold storage facility where potatoes will be stored […]"* (2_FGD1).

Subcategory 2.11 Vegetables

Summing up the information from the market-oriented farmers on the vegetables belonging to this category, broccoli, cauliflower, cabbage, carrot, beetroot, beans, onion, garlic, greens are grown in the region and the quality of the products is good: *"Very good cabbage, carrot, beetroot, garlic and onion grow here. […]. Onion, beetroot and everything that we grow here is tastier, than the same stuff grown somewhere else"* (5_FGD1). Representatives of the local tourism sector are also convinced of the quality of certain vegetables: *"Our green vegetables are absolutely unique"* (3_FGD2). Sometimes producers sell their products directly to local hotels, in other cases traders come and buy products from them. In addition, bartering takes place; for example, one participant of FGD3 (1_FGD3) exchanges carrots for onions and sweet pepper. However, as remarked by another participant of FGD3 and one participant of FGD2, there is also a shortage of vegetables in the region, and – together with fruit – some are regularly bought from outside the region, e.g. cucumbers, tomatoes and eggplants. In order to increase vegetable production and sales, two participants of FGD3 suggested using again greenhouses for vegetable production. One of them also mentioned working with solar energy: *"If we had small mini-greenhouses that use for example the solar energy, then growing and selling will be easier for us"* (1_FGD3). One participant of FGD1 added that a processing facility for broccoli would be conducive for processing and conservation: *"[…] if we had had a mini canning factory e.g. for making canned goods… broccoli canned goods are fantastic"* (2_FGD1).

Subcategory 2.12 Other products

With regard to other products, one of the market-oriented farmers informed the group that there would be a demand for the Caucasian fir and its seedlings, and that he would be planning to grow it with a special fertilizer which makes it grow very fast. According to this person the climatic conditions in the region would also be conducive for this plan.

Two representatives of the local tourism sector described the situation of wool production in the Kazbegi region. One of them explained that there is a lot of wool available in the region that could potentially be processed and sold. However, according to this person, cleaning the wool is one of the hindering factors: *"[…] it's difficult to wash it. Our region should be interested in establishing a processing factory and the residents will use this product"* (3_FGD2). Three participants of this group added that felt products seem to be good to be sold, also to tourists. Furthermore, according to the interviewees, sheep leather could have potential for being marketed, for example to Turkey, which has a great demand for it.

The interviewees of the three focus groups also provided information about the products that are not (or only in small amounts) produced in the region and are bought from other areas: *"Basically we buy flour, sugar, oil and those products that can't be produced here"* (1_FGD3). This also includes certain types of fruit and vegetables and some of the products described above, which are sourced from outside the region if there is a seasonal supply gap (e.g. potatoes). In addition, alcoholic beverages were mentioned.

Category 3 Linkages between the agri-food and the tourism sector

In total 24 codings are attributed to the main category "Linkages between the agri-food and the tourism sector". Out of these, most of the codings are included in the subcategory "Relation of agriculture and tourism" (11 codings).

Subcategory 3.1 Relation of agriculture and tourism

According to one representative of the local tourism sector, there is a strong relation between tourism and agricultural production: *"[…] let's take food products for example, it is directly related to tourism"* (2_FGD2). However, according to another representative of this group a clear separation of people involved in tourism and people involved in agriculture does exist in the region. In this regard, the statement of another participant on barriers for agricultural producers could be relevant: *"Not everybody can be involved in tourism. A peasant should be able to sell their own products, they don't need so many restrictions and documents"* (5_FGD2).

Subcategory 3.2 Sourcing of agri-food products at hotels and guesthouses

According to the representatives of the local tourism sector, various locally produced products are sourced by them. The focus group members listed potatoes, cheese, meat, and sea buckthorn. These products are only sourced from outside the region if there is a supply gap. When this is the case, visiting traders are also contacted. Cheese and meat are only bought from local producers who they trust and are in close contact with, because according to one interviewee: *"It depends much on the producers, you cannot buy from every peasant"* (5_FGD2).

Subcategory 3.3 Requirements of the tourism sector with regard to local agri-food products

Regarding the requirements that local producers should meet in order to sell their agri-food products to the tourism sector, the main topics were proper documentation and certification of animal products. Moreover, the processing conditions should be in line with legal requirements: *"We should consolidate our efforts and apply European regulations here. I need some concrete documents, those who sell milk need documents from the veterinarian. If you produce secondary products you should have special building and conditions that are provided in the law"* (2_FGD2).

Another participant called attention to labeling products for tourists not only in Georgian but also in other languages: *"We intended to sell it only at the Georgian market and did not think about the tourists. It had the Georgian label and we realized very late that we needed a legend in Russian and English, too (laughing)"* (1_FGD2).

Subcategory 3.4 Other hurdles with regard to linking the agri-food sector and the tourism sector

As pointed out by one of the representatives of the tourism sector, English language skills would be essential with regard to serving tourists who visit the region, not only with regard to the packaging and labeling of products, but also in general: *"Many people coming here from post-Soviet Union countries, these people speak Russian no problem, so European and other people only speak English. So we need not only Russian but English also"* (5_FGD2). However, as commented by another participant of FGD2, some of the locals who are involved in tourism are not aware of the relevance of the English language in tourism services: *"There's a problem that not many people think that they need to know English. They work in tourism, but they don't think it is so important"* (1_FGD2). An additional hurdle is the lack of information material on the region: *"Even brochures to advertise our region have never been published for tourists"* (5_FGD2).

Subcategory 3.5 Ideas of linking the agri-food sector and tourism

According to two representatives of the local tourism sector, the establishment of a cooperative shop would be a good opportunity to bring buyers and sellers together. In addition, it could entail specific advantages with regard to the quality of the products offered there, e.g. to offer inspected or certified products there. One of the interviewees also explained how such a shop could be implemented in practice: *"I was in a foreign country and saw stores where they sold bio products. Nine to ten farmers established an association and each of them had his own unit in the store. They did not hire a sales person but sold their products themselves: one farmer worked during one day, the second worked on the next day and so on. I liked it very much; we can do the same here, why not?"* (3_FGD2).

Another participant of the group of the tourism sector representatives was convinced that tourists are not interested in luxury but in rural lifestyle and home-made agri-food products: *“Tourists don’t seek comfort in Georgia and don’t go mountaineering to Kazbegi to find comfort there. Peasants should be briefed that if they invite tourists to their houses and make them try their home-made honey it will be the best attraction to them. That’s what they love most of all”* (5_FGD2). The statement of a small-scale agri-food producer also indicated that tourists are interested in the preparation of local dishes: *“Sometimes they even stand with us in the kitchen and observe us cooking”* (2_FGD3).

Category 4 Organic production and special dishes

In total, 15 codings are attributed to the main category “Organic production and special dishes”.

Subcategory 4.1 Certification

Although none of the interviewees directly provided information on certification, they mentioned several characteristics which are relevant for organic production. According to participants of all three focus group discussions, no chemicals are used in agricultural production in the region, as shown for example by the statement of one representative of the tourism sector: *“No pesticides are used here”* (3_FGD2). Participants from FGD1 and FGD2 also mentioned that local products would be much tastier than imported ones: *“And one more aspect why there is a demand for our products, we do not use chemicals, and our products are tastier”* (5_FGD1). However, one member of FGD3 remarked that although no chemicals are used, the polluted environment must be taken into account.

Subcategory 4.2 Role of local and or organic products

According to two representatives of the tourism sector, locally produced products are in demand by people who visit the region: *“Everyone comes here to eat biological products”* (5_FGD2). One of the small-scale agri-food producers was also convinced that local food would be interesting for touristic guests: *“If foreign tourists arrive here, they will be more interested in our wild nature and natural resources and we will supply them with healthy food. It is desirable to treat them with local, organic food”* (2_FGD3).

Subcategory 4.3 Special products and dishes

The members of FGD2 and FGD3 described several products and dishes which are specific for the Kazbegi region. Some of the dishes also exist in other regions of Georgia but are prepared differently in the region. One example was provided by one of the small-scale agri-food producers: *“Khinkali. We cook Khinkali quite a different way. Our Khachapuri also differs from others. Pkhlovani, food made of nettle and ten other different herbs that are medicinal ones as well. […] They are cooked in other regions of Georgia as well but our recipes is unique”* (2_FGD3). In addition to Khachapuri, Pkhlovani and Khinkali, Qaurma (a stew with meat) and Mtsvadi (shashlik) were mentioned. Moreover, one tourism sector representative underlined that tourists: *"[...] adore Georgian Adjapsandal*[82] *and beans"* (5_FGD2). In addition, specific herbs[83] which give the dishes a local touch were listed.

Category 5 Cooperation

37 codings can be attributed to the category "Cooperation". There are also some overlappings of the subcategories "Role of trust" and "Contra cooperation".

Subcategory 5.1 Pro cooperation

According to one of the market-oriented farmers, today's cooperatives are no longer associated with the former kolkhozes and the benefits of cooperation are seen: *"But now as they realize that it's a voluntary association and they are responsible to resolve the problems themselves and that everybody has the right to vote, they are very well aware of the advantages of these associations"* (4_FGD1). One of the small-scale producers also stated that he could definitely imagine collaborating with other people in the region. As pointed out above (category "Agri-food chain"), in former times people already cooperated outside the framework of kolkhozes, e.g. when bringing products jointly to the selling points in order to save transportation costs.

Subcategory 5.2 Contra cooperation

On the other hand, as remarked by one of the representatives of the tourism sector who was in general pro cooperation, there might also be barriers to cooperation: *"[...] it's difficult to self-organize. It's difficult to establish an association one day!"* (2_FGD2). Moreover, as stressed by one of the market-oriented farmers, the initial costs for the registration of a cooperative could be a hurdle: *"It's simply expensive, 110 GEL for registering it"* (2_FGD1). As described by a member of FGD2, cooperation might be problematic if people are not able to produce a constant amount of products and are therefore not stable partners for others. Another participant of this group also mentioned that on a macro level, successful cooperatives might entail problems for those who are not involved: *"There is one more problem as well: there might be established one cooperative which will strengthen and won't allow others to work"* (5_FGD2).

Subcategory 5.3 Role of trust

As pointed out by one of the small-scale agri-food producers, trust is an important factor for cooperation and in particular the members united in one cooperative should trust each other (1_FGD3). In turn, a lack of trust could be an obstacle with regard to cooperation. This was supported by the statement of one of the market-oriented farmers: *"We have learned that it is better not to depend on anyone and mind your own business"* (4_FGD1). However, several

[82] Adjapsandal is a vegetarian dish made from eggplants, onions and tomato, among others.
[83] Chivana, Ergovana and Tsitelpkhali.

people mentioned that there is a high level of trust among people living in the region, e.g. according to one of the market-oriented farmers: *"We trust each other, 100 percent"* (1_FGD1).

Subcategory 5.4 Situation of cooperation in Georgia and the Kazbegi region

According to market-oriented farmers of FGD1, at the time of the interview there were ten agricultural cooperatives registered in the Kazbegi region (1_FGD1). Another participant provided information on the type of cooperatives in the Kazbegi region: *"Most of them deal with market-gardening, apiculture and cattle-breeding"* (3_FGD1). One of the representatives of the tourism sector also remarked that some farmers who establish cooperatives are only interested in the benefits which come along with the registration of a cooperative and do not have the intention to produce any output: *"These cooperatives should really operate. They should not be created only for getting loans. Some peasants join cooperatives in order to get loans in a simplified way and the cooperatives stand idle and remain only on the paper"* (2_FGD2). In this group it was also mentioned that the government should provide management training in order to create successful cooperatives.

In addition to formal cooperatives, participants of FGD3, the small-scale agri-food producers, provided examples of informal cooperation which takes place in the Kazbegi region, e.g. a beekeeper from the region who collaborates with a beekeeper from Tbilisi, or families who alternate in taking care of their dairy cows when they are on mountain pastures.

Category 6 Other relevant information

According to participants of FGD1 and FGD3, people in the region take care of each other: *"We help each other. If anyone is in need others help him/her"* (2_FGD3). This is supported by the following statement on the local population: *"We are all relatives"* (1_FGD1).

4.4.3 Expert interviews

In the following paragraphs, the results of the expert interviews are provided in the form of text matrices with selected citations, paraphrases and descriptive text. As mentioned above, tables with paragraphs are only provided where characteristic citations exist or if the number of codings is high. If this does not apply, selected quotations are only provided in the continuous text. Figure 13 shows the number of codings (y-axis) per category and expert (x-axis)[84]. In addition to this graph, a table on the co-occurrence of categories is provided in Annex 3.

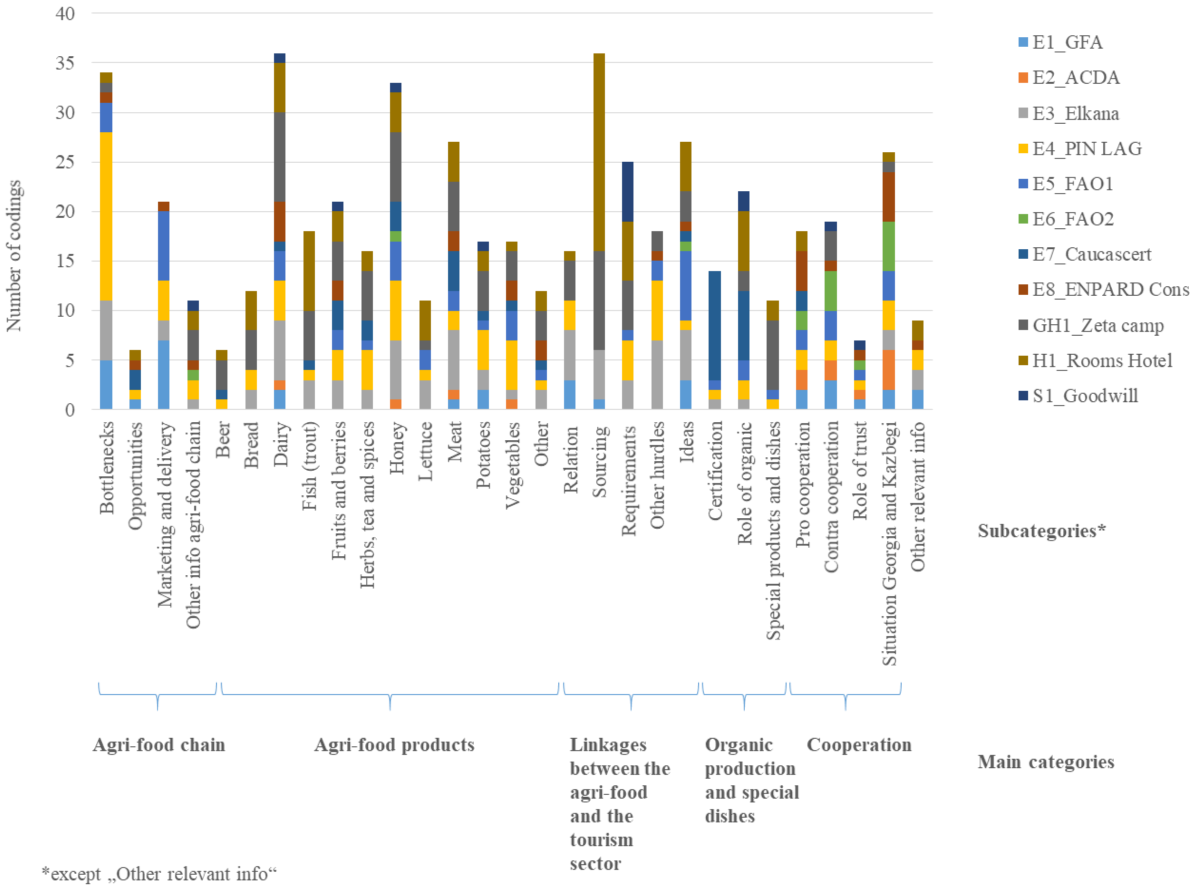


Figure 13: Number of codings per (sub)category of the expert interviews

Source: Own depiction based on the data of the expert interviews.

[84] As can be seen from the legend of the graph, the abbreviations of the experts in this chapter are in line with the definition of the abbreviations in chapter 4.3.2: E1: GFA; E2: ACDA; E3: Elkana; E4: PIN; E5: FAO1; E6: FAO2; E7: Caucascert; E8: ENPARD consultants of the company Evoluxer; GH1: Zeta Camp; H1: Rooms Hotel; S1: Goodwill.

Category 1 Agri-food chain

Subcategory 1.1 Bottlenecks in the agri-food chain

As shown in the table below, the experts described several shortcomings of the agri-food chain in the Kazbegi region. This is reflected by a high number of codings which are attributed to this category (36 out of 546 in total). Bottlenecks which are in particular relevant with regard to marketing of agri-food products are detailed under subcategory 1.3 “Marketing and delivery”.

Selected citations	Paraphrases
“So I would say the agri-food chains is underdeveloped here and much more in Kazbegi than in other regions [of] Georgia” (E5).	No developed agri-food chain in the Kazbegi region, in particular in comparison to other Georgian regions.
“[…] of course, funds are important but people need knowledge and people need some understanding that they need this knowledge […]” (E3).	Finance is important, but besides that, knowledge in particular is decisive.
“[…] when you ask people why you grow potatoes for example, ‘Because my grandpa did this.’ So, it is the issue of the lack of entrepreneurship […]” (E4).	Lack of an entrepreneurial spirit, people produce what their ancestors produced.
“So in Kazbegi if you take this region specifically, it is pretty (uhm)…because of the nature and the very bad climate there, local people are not really able to produce any agricultural goods” (H1).	Local climatic and natural conditions are a hurdle for agricultural production.
“[…] even the products that are locally produced at this stage cannot even cover the local demand” (E4).	Currently the local production is not even sufficient to meet the demand of the people who live in the region.

First of all, four experts mentioned that the agri-food chain in the Kazbegi region is neither developed nor organized. Bottlenecks occur at all stages of the chain, from input supply to consumption. One hindering factor for more development at all stages of the chain is the local population’s low access to financial services or loans. However, as was also pointed out by the interviewees, the low level of knowledge is an additional constraint with regard to value chain development: *“[…] it is about lack of knowledge, it starts and finishes there”* (E4). This lack of knowledge is based on the fact that there are few educational and vocational institutions in the region. In addition, the local population is often influenced by the behavior of their parents or grandparents, and in many cases their way of agricultural production is very old-fashioned. This is particularly hindering if the people do not even notice that they need more knowledge and should modernize their type of production because they think they already know everything. However, even local inhabitants who are active in agriculture and are willing to learn more, face great hurdles. For example, at this stage there is no permanent agricultural advisory service center in the Kazbegi region, neither a private one nor from the government.

This situation might change in the future, since the Ministry of Agriculture is at the starting stage of establishing consultation centers for agricultural producers. However, according to the representative of PIN: *"[…] even the staff they need to learn a lot at this stage"* and the services are not very advanced, in particular in comparison to other regions in Georgia. In addition to this, one expert mentioned that another problem is also the lack of entrepreneurial skills of people in the region.

Taking a closer look at the pre-production stage, one bottleneck is the availability of input supply. For instance*: "[…] there is not even a small single shop that sells seeds"* (E4). At the production phase of the agri-food chain, the small land parcels are a restricting factor with regard to agricultural output. In addition, the harsh climatic conditions affect the production success. The planning of the production process is also not done properly and the lack of information about adequate equipment and technologies keeps output levels low. Referring to the knowledge component mentioned above, in many cases people have never seen a proper production process at first hand; thus, it is very challenging for them to implement such one themselves. In addition, income opportunities are lowered by the fact that the focus in the region is only on primary production, and according to one interviewee: *"Processing? It doesn't exist"* (E4).

As mentioned by one of the interviewees, the whole agricultural output in the region is not even sufficient to satisfy the demand of local households. Another challenge, which was mentioned by two of the experts and confirmed the statements of the focus group discussions, is the lack of storage facilities in the region. These bottlenecks are clearly related to the phase of trade and final sale of the agri-food chain (see the subcategory "Marketing and delivery" below for more details).

Subcategory 1.2 Opportunities with regard to the agri-food chain

While a high number of codings could be attributed to the subcategory "Bottlenecks", the subcategory "Opportunities" contains a remarkably small number of codings (6 out of 546). However, in particular the high quality of products from the Kazbegi region, which had already been mentioned during the focus group discussions, was confirmed by the owner of the Rooms Hotel for example*: "[…] if you compare the quality again of the goods that you can produce in Kazbegi it is like if you, it is like ground and earth, it is a huge difference"* (H1).

As pointed out by the agribusiness expert of Evoluxer, the high availability of pasture land is another advantage of this region in comparison to lower regions of Georgia, in particular with regard to livestock production. In addition, as mentioned by the representative of the organic certification company Caucascert: *"[…] it is a cool area, so these virus vectors are not active, […]"* (E7). With regard to marketing products, one opportunity could be the later harvesting season in the region due to the climate being colder than in most other Georgian regions: *"[…] because of the high altitude in Kazbegi the harvest he had in late September/October when the whole Georgian market was hungry for the products"* (E4). This means that when the products from the Kazbegi region are harvested there is less supply from other regions and the demand for these products might therefore be higher. In contrast to the opinion of the representative of PIN, the representative of GFA is convinced of the entrepreneurial attitude of the local inhabitants and stated that *"[…] in Kazbegi, I still believe that the people and farmers are entrepreneurs because […] from nothing they are creating something"* (E1).

Subcategory 1.3 Marketing and delivery

As one focus of the study is on marketing of agri-food products and accordingly several questions on this topic were asked, a relatively high number of codings (21 out of 546) can be attributed to this subcategory. Furthermore, in 12 cases the codings of the subcategory "Marketing and delivery" overlap with codings of the subcategory "Bottlenecks" (See table on co-occurrences of categories in Annex 3), showing that marketing-related topics are often mentioned in connection with hurdles and bottlenecks.

Selected citations	Paraphrases
"[…] I am not sure that marketing is also done in a proper way or it's planned at all" (E5).	Marketing is likely not implemented professionally.
"They are not bringing it to city to sell it, they are selling it locally" (E1).	Products are mainly sold in the region and not in cities outside of the region.
"[…] if we are talking Kazbegi as much as I am aware, they sell it on the farm gate mainly to the people who then resell it to the markets in Tbilisi mainly" (E5).	Local producers mainly sell at the farm gate, often to middlemen who then resell it in Tbilisi.
"So just to add, in the recent past the started also to export some of the products to Russia, […] but I don't think it is documented somewhere" (E5); *"The prices are higher there, as they say"* (E5).	Some products are also sold to Russia because the prices there are higher.
"[…] what people are producing there, they are selling it in local hotels" (E1).	Local products are sold to local hotels.
"First the biggest challenge is that there is no consolidation centers or the storages and the farmers when they are harvesting they are trying to sell it right away and when, because every products has its own harvesting time, and when we have a flow then the price drops" (E1).	Due to the lack of storage facilities, all producers sell at the same time and thus prices fall.
"But the other issue is they don't have enough products to sell, they often use their own products for their families and households" (E3).	There are not enough products available to be sold and the local population often uses their products for their own consumption.

First of all, several experts doubted that marketing in the region is planned or implemented professionally at all. According to three experts, local agri-food producers mainly sell their products in the Kazbegi region. Among other reasons, this is due to the distance from Kazbegi to Tbilisi and the time which is needed to drive there. However, as mentioned by the agribusiness expert of Evoluxer, in many cases it is even problematic to reach certain areas or villages within the municipality: *"[...] in lowlands, for instance, producers, small-scale farmers themselves can catch the mini-bus and come to the market [...]. But in mountain areas it is not so easy. Some of the villages are so far from the central kind of municipality that even to reach that municipality is complicated for them, not to come to Tbilisi"* (E8). The main center for selling products in the region is Stepantsminda, which might also be a hurdle for people from the surrounding villages who want to sell their agri-food products, as pointed out by the representative of PIN: *"[...] I have to actually hire a private car to go to the nearest market which is Stepantsminda [...]"* (E4). In addition, even if the producers are able to bring their products to Tbilisi, they do not have the guarantee that they will sell their products (E1). According to the representative of Elkana, this is also a problem because they have to go back on the same day and are thus forced to sell their products at low prices before going home.

For this reason, as also described during the focus group discussions, many people sell their products at the farm gate to traders who come from other regions to the Kazbegi region. However, as remarked by the representative of GFA, this might become problematic during winter if the roads to the Kazbegi region are blocked and traders are not able to access the region.

Besides selling their products at the farm gate to traders who then resell it in Tbilisi, some of the producers also started to export their products to Russia. According to one representative of FAO (FAO1), this is due to higher selling prices that can be achieved there. Another option, which could be described as a type of "contract-farming", is to sell the local products to local hotels and guesthouses: *"So there are cases like that that farmers are producing and another farmer who has a guesthouse is buying from them"* (E1).

The representative of Zeta Camp also informed the interviewer about a lack of places to source products: *"At this time it is very difficult to find a place where you can buy something"* (GH1). The other side of the coin is reflected by the statement of the representative of PIN when talking about the marketing locations in the region: *"But the point again comes to where?"* (E4).

As briefly mentioned for the category "Bottlenecks", the lack of storage facilities is a main hurdle with regard to selling agri-food products. It forces the agri-food producers to sell their products straight after harvest, which leads to an over-supply and thus reduces the selling-prices. This point was mentioned by three of the interviewees.

In addition, two experts (E3 and E4) also pointed out that there are not even enough products to be sold: *"Hmm I don't see problems with the marketing, I see problem with, let's say, lack of products to be marketed. Because marketing will follow eventually if there is something to be sold"* (E4). This lack of a sufficient amount of products to be sold is also supported by the fact that the local families often use their products for their own consumption, which was also described by participants of the focus group discussions and mentioned under category 1.1.

Subcategory 1.4 Other information on the agri-food chain

Out of 546 codings, 11 can be attributed to the subcategory "Other information on the agri-food chain". When asked about the historical situation of agriculture in the Kazbegi region, the experts often referred to the changes that have occurred since the years following the breakdown of the Soviet Union. For example, the experts confirmed the pre-study and the focus group discussions with regard to the greenhouse vegetable production in former times: *"[...] during Soviet period Kazbegi had free gas, and so these greenhouses were very developed and they produced some tomatoes, cucumber in their greenhouses and sell in other parts of Georgia and also in Vladikavkaz"* (E3). As gas is not provided for free anymore, most of the greenhouses have been demolished. This change is also underpinned by the representative of Rooms Hotel: *"Yes, and during that time the region was pretty wealthy because they were able to produce a lot of agriculture because without costs. But then the change of government they had to pay for the gas and all these greenhouses actually died the same day"* (H1). Also confirming the pre-study, besides greenhouse production, sheep breeding was very popular in former times, but the number of sheep has been reduced drastically. Cattle breeding was one main type of production in former times and also continues to be important for the region today, as also pointed out during the focus group discussions.

Although the vegetable production decreased tremendously with the demolition of the greenhouses, the variety of products available in the region is increasing again: *"But now it is starting to produce something there, in summer we already had opportunity to have something like local fish, and it was very good, local honey, potatoes, cheese, and three years ago you just could buy cheese and milk, nothing more"* (GH1). Government grants are also available for the development of the sector and several projects have been implemented: *"Plus it is good that this rural development thing has been started recently, as you know, under ENPARD. [...] I think they will be considering this support to establish this rural tourism, small hotels and something like this"* (E6).

In addition, the idea came up to develop a brand for the whole Kazbegi region and thus also the local agri-food chain: *"[...] Kazbegi as an area brand, because again lack of specific products to be branded (laughs) gives us direction to the area branding and regional branding because in this term we could actually promote not only certain products, but also services linked to the products and the whole chain that actually promotes then the region in the end"* (E4). According to the representative of Goodwill, a label representing the Kazbegi region could also be used: *"So, if there are mountains on the label and so on why not, of course, we love our country, we love our regions, why not for Kazbegi, if Kazbegi name on some packaging or something like that, why not?"* (S1).

Category 2 Agri-food products

Subcategory 2.1 Beer

Only 6 codings (out of 226 for the category "Agri-food products" and 546 in total) can be attributed to the subcategory "Beer". The data reveals some very contradictory information about the marketing potential of beer. According to the representative of Zeta Camp, there is a high demand for locally brewed beer: *"When you say that I have something from mountain,* *beer, ah everybody wants to taste it, everybody, also Georgians. And the foreigners, so the guests from different countries, they are always interested"* (GH1). However, the representative of the Rooms Hotel as well as the representative of Caucascert are skeptical with regard to the quality of local beer: *"[...] because what they produce there locally may not be suitable in terms of industry quality"* (E7). In addition, according to two experts, hops and barley would have to be imported from other regions: *"Everyone mentions it and then whenever I am asking 'how do you see to do it?' nothing exists of the ingredients for beer locally. You have to bring everything from somewhere else, and it needs a serious business consultant to think and count how profitable it would be for such a small region to have a brewery"* (E4). However, it has been a tradition to produce beer in Kazbegi, in particular when there was a national holiday. Even today some family production still takes place, for example after someone has died the family brews beer. According to the representative of Zeta Camp, the ingredients could also be collected locally.

Subcategory 2.2 Bread

The subcategory "Bread" contained 12 codings, including information on various types of bread, including Khachapuri, a bread filled with cheese, which is a typical Georgian dish. Several representatives of the tourism sector mentioned that they offer locally produced types of bread. In Zeta Camp Khachapuri with local cheese is offered, while Rooms Hotel buys locally produced Shotis Puri, a typical Georgian bread (usually made from wheat flour) produced in a clay oven. According to the representative of Rooms Hotel, local bread is bought throughout the year and is paid for on a monthly basis. In addition, they also plan to prepare other types of bread themselves for the guests.

Subcategory 2.3 Dairy products

The subcategory "Dairy products" contains 36 codings from the analysis of the expert interviews, which together with the subcategory "Sourcing" is the highest number of codings of all categories. There is also a high overlapping of the categories "Dairy products" and "Sourcing" (13 overlappings), which might be due to the fact that local guesthouses and hotels offer at least some milk products or sometimes also milk from the region.[85] On the one hand, according to the experts there is a high demand for dairy products; on the other hand, several hindering factors for marketing dairy products have been mentioned, in particular with regard to marketing raw milk.

[85] Overlapping of codings of "Agri-food products" and "Sourcing of agri-food products at local hotels and guesthouses" occur if the local products are also sourced by local hotels or guesthouses. In the case of the expert interviews, the three highest numbers of overlappings occur in the case of dairy products, honey as well as meat and fish (both 8). In the case of the focus group discussions, the highest number of overlappings also occurs for dairy products, followed by meat and potatoes. However, although there is an overlapping it does not mean that all products of a certain category are sourced locally, e.g. in the case of fruit, strawberries are not sourced locally, while sea buckthorn is a typical local product offered at hotels and guesthouses of the Kazbegi region.

Selected citations	Paraphrases
"If you ask anyone here it is either sheep, cheese and potatoes […]" (E5).	Cheese, sheep and potatoes are typical products of the region.
"Why people are now having these cows is because they are allowed to graze freely" (E4).	The local population has cows because of the access to grazing areas.
"[…] they don't have enough milk to have the factory" (E1).	The milk yield is not enough for dairy processing establishments.
"And the third one is the low production of the milk that ends up in low amount of, really small amount of the dairy products […]" (E4).	The low milk yield results in a low variety of milk products.
"[…] you cannot produce cheese with the regular technologies you do at home, if you want to sell it and produce it formally and officially you have to comply with all the standards required from the national food safety agency, […] you have to have, ok let's don't call it sophisticated but at least minimum technologically equipped factory in place" (E8).	The technology used when producing cheese at home are not sufficient to comply with official food safety standards. Thus, to fulfill the requirements, a production facility with simple equipment would be needed.

Together with growing potatoes and keeping sheep, keeping cattle and producing cheese is typical for the region. In general, the local population can keep cattle without great effort as there are many grazing areas available. There might therefore be potential to have more cattle and thus increase the production of dairy products such as cheese: *"[…] they should use that kind of advantage […] cheese and meat production has a potential there"* (E8).
However, several other factors restricting a more effective and professionalized dairy production were mentioned by the experts. First of all, there is not even a milk collection center in the region, which makes it difficult to comply with the food safety standards which are required by the Georgian legislation. For this reason, the agri-food producers who sell their milk or dairy products do not currently officially sell their products: *"[…] there are a couple families who can afford to produce homemade cheese. And at this stage they are selling it, let's say illegally, because in Georgia according to the regulations, you cannot sell without certain standards"* (E4). In order to comply with new standards (e.g. the HACCP[86] standard), investment in modern equipment and technology would be needed. However, as was also mentioned by the representatives of PIN and GFA, investment in milk collection centers and food safety standards might not produce sufficient returns as the milk output in the region is quite low.

According to the expert from PIN, the low output might be due to the local breed which is used. In addition, local milk is available during summer, but in the winter there is a supply gap.

[86] HACCP is a concept to ensure food safety and stands for hazard analysis and critical control points.

Furthermore, there is only a low variety of dairy products available and the majority of this is cheese. This was also supported by the information of the representative of Zeta Camp: “*I asked the local people to make cottage and we could pay any money, and they say ‘we don’t have enough milk for it and enough time, and it needs time and we prefer to sell just cheese’”* (GH1). In addition, the representative of Caucascert also remarked that it would be difficult to produce organic milk from the region because then the feed for the cows during winter would also have to be organic.

Subcategory 2.4 Fish (trout)

Out of 226 codings for the category “Agri-food products” (and 546 codings in total), 18 can be attributed to the subcategory “Fish (trout)”. According to the expert from Caucascert, due to the availability of clean rivers, the Kazbegi region would be suitable for organic trout production. Furthermore, organically produced trout could achieve high prices: *“[…] my understanding is that Kazbegi area is very good for organic aqua-culture. Especially with trout because you can provide this running water, clean water, you can produce the trout organically and organic trout has very good value […]”* (E7).

The representatives of Rooms Hotel and Zeta Camp both mentioned that their guests like local trout. Furthermore, according to the representative of Rooms Hotel, there is a huge demand for local trout due to the high quality: *“If you take the local fish, it is just incomparable to what you can buy in Tbilisi, it is so much better, so much fresher and so much different”* (H1).

Nevertheless, according to the representative of Elkana, so far there are only up to four or five fisheries in the region. As explained by the interviewee of PIN, also a certain amount of knowledge and planning is needed in order to operate a trout farm successfully: *“Trout, not a bad thing. Again, we met two families who started this business and who didn’t have any opportunities or knowledge how to access educational materials and they just closed down”* (E4). Furthermore, this expert mentioned that during winter the water might freeze, and the trout production could not be operated throughout the whole year. However, the representative of the Rooms Hotel stated that if the trout is produced in the local rivers, they are able to buy fresh trout all year long; this person does thus not confirm the problem of freezing water.

Subcategory 2.5 Fruits and berries

Out of 226 codings for the category “Agri-food products” (and 546 in total), 21 can be attributed to the subcategory “Fruits and berries”, with the focus on data on strawberries and sea buckthorn.

According to the representative of the Rooms Hotel, the variety of berries in the Kazbegi region is probably not very high: *“[…] in Kazbegi there is a very little amount probably of different berries”* (H1). This goes in line with the statement of the representative of Elkana: *“[…] tourists need fruit, they buy fruit transported from Tbilisi or Ossetia […]”* (E3). However, one berry that was mentioned by various experts is sea buckthorn. According to two of the experts, there are lots of wild sea buckthorn plants in the Kazbegi region. Different methods of marketing sea buckthorn (products) take place in Kazbegi. The representative of Zeta Camp described how local women collect and market the berries: *"Yes, so in the autumn, the local woman they are collecting it and my mother always buys it from Kazbegi, but it is already made you know, she buys it with some glasses and it is cleaned and it looks like jam […]"* (GH1). This "jam" is also offered to the guests of Zeta Camp and Rooms Hotel who like to use the jam in their tea.

According to the agribusiness expert of Evoluxer, a Georgian juice company has already built a consolidation center to store frozen sea buckthorn in the Kazbegi region. The sea buckthorn is then brought to the juice factory and processed. As informed by the representative of Elkana, during a competition on business ideas, two local women also had the idea to establish a business producing juice and jam out of sea buckthorn. However, one problem with regard to sea buckthorn is the way it is collected. According to the representative of PIN, although there are regulations on collecting, the collectors often damage the whole plant because picking the small fruit is exhausting: *"It is not the buckthorn, it is the regulation on collecting, because it is so small, everyone is lazy to pick it up one by one and they were tearing it apart totally, so you are damaging the whole plant, and that is the issue"* (E4). In general, it should not be a problem for the people who collect the fruit to comply with the regulations, because according to the expert, equipment for a more careful picking process should be available. However, the local population must have access to this information and would need consultancy.

The experts also provided data on strawberry growing in the region. According to the representative of Zeta Camp, strawberries are not a new variety in the region and were already grown by her grandfather. An expert of the FAO was convinced of the quality of today's local strawberries: *"The strawberries are nice there"* (E5). As stated by this person, the strawberries are either sold at the farm gate or bought by intermediaries in order to be sold at other locations, for example in Tbilisi. The representative of the ACDA was of the opinion that besides honey and dairy products, strawberries could also be interesting for tourists. Remarkably, at the time of the interview, the representative of the Rooms Hotel was not aware of the fact that strawberries are produced in an amount intended for selling. However, he affirmed that they would buy it: *"Definitely yes, if they will be able to like, even if the quality won't be very, very good, it is local and organic, we will still buy it"* (H1).

For products that grow wild such as wild berries or sea buckthorn, the representative of the company Caucascert indicated that organic certification could be obtained in a relatively short time: *"In wild collections there is no requirement for transition period. So if you go and collect some wild fruits or wild plant parts or whatever is needed, they find market relatively easy"* (E7).

Other fruits or berries were mentioned only very rarely. One example was provided by the representative of Elkana, who knows one woman who produces jam from regional cherry plums and sells it to her circle of acquaintances in the region and in Tbilisi.

Subcategory 2.6 Herbs, tea and spices

Out of 226 codings for the category "Agri-food products" (and 546 in total), 16 can be attributed to the subcategory "Herbs, tea and spices".

Selected citations	Paraphrases
"So we collect the different...like thyme, mint, wild mint I mean and also Rhododendron, it is very, very popular and it is very good for health" (GH1).	Various herbs are collected, e.g. thyme, wild mint and Rhododendron Caucasicum, which is in high demand and has beneficial health effects.
"It could be local herbal teas, because in Kazbegi it is a huge potential" (E4).	There is high potential for herbal teas from the Kazbegi region [to be marketed to tourists; author's note].
"This herbal tea is not certified, we just collect it, and we just put it in a clean place, and it is dry, that is all, but they just prefer to have it" (GH1).	The production of local herbal tea is not certified, processing is simply done by drying the leaves in a clean place; nevertheless, they [the tourist guests; comment of the author] give priority to this type of tea.
"Standards of collecting herbal products, there is regulations forestry and so on, then you need equipment to dry it and you need to be registered and package it properly [...]" (E4).	There exist standards and regulations for the collection of herbs; appropriate equipment for the drying process and packaging is also needed.

As mentioned by several experts, there are various wild herbs and plants or spices in the region which can be collected and used for cooking or preparing teas. Among these are thyme, wild mint, rhododendron caucasicum, and caraway, which for example is used for local Khinkali. According to the representative of Elkana, some local teas (e.g. thyme) have a beneficial effect on health: *"There are some interesting herbs for health, and for how to say, after drinking you sleep well or your heart system becomes, how to say (...) calms down probably!"* (E3). This statement was supported by the representative of Zeta Camp, who also offers local herbs and teas.

Tourists who come to the Zeta Camp prefer local herbal tea in comparison to other teas: *"We also have the normal black and green tea, but nobody wants it when they see herbal tea, the local one on the menu, everybody just wants to drink it"* (GH1). However, although there is demand from the side of the tourists and the circle of acquaintances, Zeta Camp does not officially sell the herbal tea besides that which is offered to the visitors onsite. According to the interviewee from Rooms Hotel, there are four to five types of local tea. The herbs and plant leaves are sold by local women who also collect them. As stated by both the representatives of the Rooms Hotel and Zeta Camp, the processing process is very simple as the herbs are only dried in the sun and then sold. As mentioned by two experts (the representatives of PIN and Zeta Camp), there would be a huge potential for producing herbal teas in Kazbegi and also selling it to tourists. However, as cited by the representative of PIN, there is not only a lack of equipment but also a lack of knowledge about the whole production process, which is hindering the production of tea: *"With herbs it is totally about collecting regulations without damaging* *it and after you go these steps what is the standards, then it is about introducing technical issues like operationally how it should be done"* (E4). One expert who himself is not working in Kazbegi region also was not sure whether there was a huge potential for herbs from the region in comparison to herbs from other regions. As stated by the expert of the company Caucascert, as in the case of wild berries, for the wild collection of herbs organic standards could be met relatively easy due to the above-mentioned omission of a transition period in wild collections.

Subcategory 2.7 Honey

A lot of data was provided by the experts on the production of honey (33 codings out of 226 for the category "Agri-food products" and 546 in total). In particular, the interviewees who are actively involved in the region, such as the representatives of PIN and Zeta Camp, could provide in-depth details on the situation of beekeeping and marketing of apiculture products.

Selected citations	Paraphrases
"[...] there are perfect conditions for beekeeping in Kazbegi" (E4).	The environment in the Kazbegi region is very good for apiculture.
"Local honey has really good quality and good taste [...]" (E3).	Honey from the region is of high quality and tasty.
"In general, there is a very high demand for honey, but for honey free of pesticides" (E7).	The high demand of honey is restricted to organically produced honey.

As stated by several experts, the quality of honey from the region is good and the product would be in high demand: *"Honey is very popular, yes"* (GH1). It is mainly sold directly to friends and colleagues: *"Honey is based mostly on direct marketing. What they do normally they have people in Tbilisi somewhere working in big offices [...]. And they sell you know to the colleagues [...]"* (E7). In some cases, honey is also exported to Russia. Furthermore, it was mentioned that honey might also be an interesting product to be sold to tourists. Among other tourist accommodations, Zeta Camp and Rooms Hotel also offer local honey to their guests: *"Honey, for breakfast is a must, the local one"* (GH1).

According to the representative of Elkana, so far *"[...] there is no place where this honey can be bought"* (E3). The establishment of such a sales location could be helpful for marketing the local product. In addition, knowledge of branding and adequate packaging would be needed with regard to marketing the product. The interviewee from Goodwill also remarked that, in order to be able to buy honey from the Kazbegi region: *"Honey should be bottled and labeled, of course [...]"* (S1). But, in regard to this topic, one expert from the FAO provided the information that the need for adequate packaging also depends on the buyer: *"So then they went to Greece after Soviet Union, so many of them are returning back for the summer vacations and what they want to buy is honey because they are nostalgic for the Alpine kind, but the preferences are for the honey which is artisanally packed if we can put it this way and they prefer to buy them in the simple glass jar without anything, I guess it gives more sense of organic, family made product rather than something commercial"* (FAO1).

The expert from Caucascert remarked that organic honey production in the Kazbegi region would be difficult due to the use of antibiotics and toxic fumigation substances as well as pesticides: *"Ok, honey, so honey is a difficult issue because they use antibiotics"* (E7). However, this expert acknowledged that the fact that there are no other sources of contamination in the region is beneficial to local apiculture. Two other experts also stated that there is a new laboratory at the Ministry of Agriculture where the quality of honey could be tested. In addition to this government effort, training on the production and marketing process as well as adequate equipment would also be important, as noted by the representative of PIN.

Subcategory 2.8 Lettuce

The experts did not provide much data on growing lettuce (11 codings out of 226 for the category "Agri-food products" and 546 in total). The commercial production of lettuce in the Kazbegi region had been supported by the USAID NEO project. However, as remarked by the representative of PIN, there were some problems in selling the output, as lettuce is not part of the traditional local cuisine and some producers even had to throw away a part of their harvest because they could not find buyers: *"And you can only count restaurants and tourists, who actually know what these green leaves are. Seriously (laughs)! But even a couple of restaurants told us that they are not buying it because they don't even know what to prepare out of it"* (E4). This information was confirmed by the representative of the Rooms Hotel: *"So basically our hotel was the property which bought the whole produce (laughs), because no one would be buying salad leaves in Kazbegi, you understand"* (H1). Moreover, the representative of the Rooms Hotel was very impressed by the quality of the local lettuce: *"[…] the salad leaf was so much better than what we were getting from Tbilisi, so fresh, so hard and so good"* (H1). Part of the local lettuce production is also sold in Tbilisi (either by the producers themselves or via traders) or exported to Russia.

Subcategory 2.9 Meat

A high number of codings can be attributed to the subcategory "Meat" (27 codings out of 226 for the category "Agri-food products" and 546 in total). Thus, a lot of data was provided on meat and its production and marketing during the expert interviews. Furthermore, the subcategory "Meat" co-occurred four times with the subcategory "Requirements of the tourism sector with regard to local agri-food products" (see table Annex 3).

Selected citations	Paraphrases
"[…] they are mostly in husbandry, they have cattle and sheep" (E1).	Cattle and sheep breeding are typical activities.
"[…] because they have this natural advantage of having these pastures […] and […] meat production has a potential there" (E8).	Due to the comparative advantage of having a lot of pasture land, meat production could be successful.
"[…] because one thing is there is no slaughterhouse" (E4); *"[…] you cannot invest 100 000 in Kazbegi when you might have one or two cows to slaughter in a week"* (E4).	There is no slaughterhouse in the region. However, it does not make sense to invest a large amount of money if there are only a small number of cows to be slaughtered during one week.
"But probably Kazbegi region could relatively easy produce organic meat based on their pastures" (E7).	The availability of pasture land would be conducive for organic meat production in the Kazbegi region.

One advantage of the region that contributes to the breeding of cattle or sheep is the availability of pasture land, which was mentioned by two experts. According to the expert from Elkana, cattle breeding was also the most cited topic in a contest on local economic activities: *"You know 98% of locals who participated in these contests were talking about cattle breeding"* (E3). Their idea was to buy young calves, fatten them for one or two years and then sell them alive for slaughter.

As also explained by the representative from Elkana, in some cases animals are slaughtered at the houses of local inhabitants without any documentation or veterinary testing, as there is no slaughterhouse in the region. The lack of a slaughterhouse also impedes selling to bigger hotels who must adhere to food safety standards. However, as stated by the representative of the Rooms Hotel, this would change with the establishment of a slaughterhouse: *"The most important, the most valuable from here will be meat of course, if there will be a slaughterhouse, we will be buying a lot of local meat, a lot"* (H1). However, as was pointed out by the representative of PIN, it would be necessary to check whether a regional slaughterhouse would be profitable, taking into account the number of animals which are there to be slaughtered.

Larger numbers of animals are also transported to Tbilisi and slaughtered there: *"[…] but when you are talking about 20, 30 cows it is mostly done in Tbilisi in some organized way"* (E3). However, for local livestock owners, the fact that the nearest slaughterhouse is in Natakhtari, which is close to Tbilisi, is also a big hurdle. Transporting livestock there for slaughter and then bringing back the meat is costly and also increases selling costs: *"[…] that is why the restaurants cannot afford to buy local meat […]"* (E4). In addition, as stated by the representative of Elkana, local producers tend to sell their locally slaughtered meat without documentation in order to avoid tax payments.

With regard to cattle, according to the certification expert of the company Caucascert, organic meat production could potentially be implemented in the Kazbegi region: *"What do they have in Kazbegi, meat? It will be in transition during the summer months, so it will be organic only at the end"* (E7). As there is a six-month period of conversion from conventional production to organic production and taking into account requirements with regard to veterinary control, young calves could be brought to the pastures for fattening during spring and summer, and after this period they could be sold for organic meat production. According to the representative of Evoluxer, for the regional sheep and cattle producers, cooperation might be a good opportunity, not only at the stage of production but also at the stage of processing (so-called second level cooperation, see also subcategory "Situation of cooperation in Georgia and the Kazbegi region") .

The production of meat except from animals other than sheep and cattle is mainly restricted by the availability of feed, as remarked by the expert of PIN: "*Pigs, comes to feeding them. And if locally you don't have any product that you can feed your pigs and you are depending on purchasing from other regions […] that is why in most of the households they don't have even now one or two chickens. Rabbits, again what do they eat"* (E4). Moreover, as explained by the representative of Zeta Camp, there is no tradition of eating pork in Chewsureti and Tusheti. According to this expert, there is no demand for sheep meat from the tourists either; only beef is regularly in demand: *"Cattle is the stabile one, so we need it every day, but with sheep and pigs for example we don't use it"* (GH1). Furthermore, in contrast to the statement of the expert of PIN, according to the representative of Zeta Camp, the production of rabbit meat has successfully begun.

Subcategory 2.10 Potatoes

Out of 226 for the category "Agri-food products" (and 546 in total), 17 codings can be attributed to the subcategory "Potatoes".

Selected citations	Paraphrases
"[…] also very good quality of potatoes is produced in Kazbegi, very tasty and healthy because of climate there […]" (E3).	The quality of potatoes from the Kazbegi region is very high; they have a good taste and are healthy due to the local climatic conditions.
"For potato it is a good area, the only thing is that, you know, arable land is not very big there, […]" (E7).	The region is suitable for potato production, but the available area of arable land is small.
"[…] the produce is not during the full year" (H1).	[Potatoes; author's note] are not available throughout the whole year.
"[…] because everybody wants to keep it for themselves for the winter, they don't actually want to sell it […]" (H1).	One reason is that the local inhabitants prefer to hold back their harvest for themselves for the winter and thus do not sell it.

According to two interviewees (E3, H1) local potatoes are of an exceptional quality: *"[…] the quality of potatoes is really good in Kazbegi […]"* (H1). The representative of the Rooms Hotel even buys them for the own family and acquaintances. The expert from Caucascert also mentioned that the area would be suitable for potato growing, however, as remarked by this expert and the representative of PIN, the availability of arable land restricts the amount which can be produced. The representative of PIN even questions *"[...] if it is worth to produce 1000 kilo of potatoes in a place where you can have three green houses in the same amount of the land and produce ten different types of vegetables"* (E4). The low potato yield was also confirmed by statements on supply gaps by the experts of the tourism sector: *"So maybe from August they have not more old potatoes and they have to wait for the new one, [...] and from August I buy it also in Tbilisi"* (GH1). This situation was described even more negatively by the representative of PIN, who pointed out that local potatoes would already not be available from late November on. In addition, in many cases the producers also use the potatoes for their own consumption.

In order to store the potatoes throughout the year (and thus better cover seasonal fluctuations), a consolidation or storage building would be helpful: *"For example if you make a consolidation center or storage for potato, whole village might use it and be a beneficiary of this"* (E1).

The certification expert also informed the interviewer that the low occurrence of viruses and pests due to the cold climate, and the availability of organic manure would be conducive for starting organic potato production. Furthermore, this expert is confident that: *"[...] Kazbegi would be able to supply some potato producers with nitrogen that will be acceptable for organic standards"* (E7).

Subcategory 2.11 Vegetables

Out of 226 for the category "Agri-food products" (and 546 in total) 17 codings can be attributed to the subcategory "Vegetables".

Selected citations	Paraphrases
"[...] this is not a traditional region for vegetables [...]" (E4).	The Kazbegi region is not typical for vegetable production.
"[...] they had these greenhouses because they had the free gas in Kazbegi [...]" (GH1).	In the Kazbegi region, greenhouse production was common, as the supply of gas was free of charge.
"But the huge demand is, what I see from locals or tourist is tomato, cucumber, cabbage" (E4).	Vegetables such as tomato, cucumber or cabbage are in highly demand by both the local inhabitants and tourists.

According to the expert from PIN, the Kazbegi region is not a typical area for vegetable production. However, the expert from Caucascert remarked that the region could be suitable for vegetables such as lettuce and broccoli, and that cabbage could be grown even during winter time. As explained during the preceding study phases, while previously many local families had greenhouses to produce vegetables such as tomatoes and cucumbers, when the provision of gas stopped greenhouse production was too expensive and the local population could not continue this type of production. There are also ideas to reactivate old greenhouses, but, as pointed out by the PIN expert, it would be better to build new energy-efficient greenhouses, which have been tested in other regions of Georgia. The idea of using energy-efficient greenhouses also came up in the course of the focus group discussions. However, according to the agribusiness expert from Evoluxer, the use of such types of greenhouses in the Kazbegi region would not make sense from an economic point of view: *"[…] here are the players that have 10, 15, 20 hectares of greenhouses, the modern ones and they invested like 1 million per hectare, that is why you cannot compete […]"* (E8).

The perception of the experts regarding the demand for vegetables is also not consistent. While the expert from ACDA as well as a consultant for the ENPARD project doubt that there would be much demand for vegetables from the side of the tourists, the expert of PIN stated the contrary: *"Vegetables. If you ask me that is one of the biggest demand locally and could be one of the profitable […]"* (E4); *"[…] even from Northern Ossetia from Russian side people will buy it because they also like these kind of products"* (E4). The representative of Zeta Camp confirmed that hotels and guesthouses in the region would start buying locally produced vegetables: *"But if two, three people they would start it, it would be great for local business, for local hotels, I always prefer to buy something Georgian and not Turkish, I am (laughs) not against it, but I really don't like Turkish tomatoes, it is big difference"* (GH1). Vegetables are also sold at the farm gate to traders *"[…] who were going to the farms and buying the products from them right there and then selling it to Tbilisi"* (E5). Currently, some locally produced lettuce and broccoli is also exported to Russia.

According to the representative of PIN, for successful production of vegetables in the Kazbegi region, expert advice or study tours for the local producers would be needed, including advice on deciding on the type of vegetables and production (e.g. with greenhouses or without). One example of the need for consultancy is the lack of knowledge of preserving techniques such as marination: *"[…] no one in Georgia knows what broccoli is, so no one even imagines that it can be marinated and then marketed throughout the year"* (E4).

Subcategory 2.12 Other products

Out of 226 for the category "Agri-food products" (and 546 in total), 12 codings can be attributed to the subcategory "Other products".

When asked about their opinion on the idea of growing Caucasian fir in the region (which came up during the focus group discussions), four of the experts were not convinced of the idea. Among them was the representative of Caucascert who stated that there is mainly birch forest in the Kazbegi region: *"I mean, I don't see there much Caucasian fir"* (E7). A representative of FAO also argued that a specific variety of trees would be needed, which would probably not be available in the Kazbegi region: *"I am not sure why they are not doing it in Kazbegi, yet. Most probably they don't have this variety"* (E5).

According to a consultant of the ENPARD project, the wool production in the region could have potential due to the availability of pasture land and the fact that up to *"10 to 15%"* (E8) of sheep breeders in Georgia bring their animals to Kazbegi during summer: *"[…] for instance this wool production is also an interesting value chain […]"* (E8).

Products imported to the Kazbegi region for tourists mostly include fruit, bread and wine, as pointed out by the representative of Elkana.

Category 3 Linkages between the agri-food and the tourism sector

Subcategory 3.1 Relation of agriculture and tourism

Out of 546 codings in total, and out of 122 of the main category “Linkages between the agri-food and the tourism sector”, 16 codings can be attributed to the subcategory “Relation of agriculture and tourism”.

Selected citations	Paraphrases
“Guesthouse owners I think only run this guesthouse business, and people who are involved agriculture and cattle breeding are separate” (E3).	The owners of guesthouses focus on activities in the tourism sector, while people who are involved in agriculture (e.g. cattle breeding) only focus on this sector.
“Household garden is so small, you need a place for tourists to relax. You don’t have a time any more to have a cow there, […]. This combination, it doesn’t exist yet” (E4).	The combination [of both sectors; author’s note] does not exist, because areas close to the houses are used for tourists, and furthermore, the owners no longer have the time to keep cows.
“[…] the tourist they really prefer local food. So, your market during the summer time it’s the tourists […] and during the winter time you have Gudauri. So if you have anything locally produced in agricultural sector, you have local market product” (E4).	Tourists have a preference for local food; for this reason, in summer local agri-food products can be marketed to tourists in the region, and during winter in Gudauri.
“And I think that this situation that the tourism is developing it will develop also the agriculture. It’s like a chain, so without it you will have nothing you will have problems, and the people they think ‘yes I will produce this and I will have money’” (GH1).	Like a chain reaction, the development of tourism might lead to the development of agriculture, as it offers the local population the opportunity to produce and sell products and thereby increase their income.

According to the representatives of PIN and Elkana, a separation of agriculture and tourism can be observed in the region. The representative of PIN even stated that people who have the opportunity to work in tourism are *“[…] out of agriculture immediately”* (E4). One reason for this is the fact that most of the tourism is concentrated in Stepantsminda and Gergeti, and in these areas there is not as much space for keeping livestock as in other villages of the region: *“Because, I mentioned tourists mostly stay in Kazbegi*[87] *and Kazbegi people don’t have an opportunity to have a big amount of cattle or big plots. This is one of the problems because*

[87] Stepantsminda is also known by the name Kazbegi; in this case, Kazbegi refers to the settlement Stepantsminda and not the Kazbegi region.

other villages cannot get some income from tourism, and the only source is to sell their products in Kazbegi" (E3). In addition, household gardens are used as recreational areas for the tourists and the service providers face time constraints with regard to keeping their own animals. The other side of the coin is that the villages of the region do not yet profit from the increase in tourism. In line with that, the representative of PIN (E4) also remarked that the development of public transport would be essential for bringing the tourists also to the more remote villages, which might then also lead to a diversification of income: *"That is why it is so important to have at least some kind of public transport right now then if tourism will spread into different villages then people will look into combination into different sectors […]"* (E4). However, at the moment, as mentioned by the representative of Elkana: *"In villages people are really poor, they don't think about things to connect some or develop some chain they just want to survive"* (E3). In addition, the possibility of being involved in both sectors at the same time also depends on the climatic conditions of a location, as was remarked by the representative of Zeta Camp: *"We have no chance to have something local, because we are really high and the weather is changing every minute, […]. But in Kazbegi I think that yes somebody will start also this, to have their own products and to have also the hotel"* (GH1).

As mentioned by the representatives of the GFA and Zeta Camp, the development of the tourism sector could also lead to the development of the agricultural sector, as the growing market might be an incentive for agricultural producers to increase production: *"When you have a tourist, it means you have to have a primary production, you cannot be 80% dependent on the imported product. So that is what I am thinking that the creation of the hotels, guesthouses, infrastructure, services, will give you the opportunity to motivate population to create the primary production and sell to buyers"* (E1). The representative of PIN added to this by stating that the tourists are also interested in local food and that there would also be a market to sell products to tourists during winter time, for example in Gudauri. In addition, the expert was convinced that *"[…] this region has unique opportunities to be really operational 12 months, in both sectors actually, agriculture and tourism and actually if these two sectors work both together […]"* (E4).

According to the interviewee of Zeta Camp, information exchange between actors of both sectors might be supportive: *"[…] I help the local one just to say 'I need this, please do this and I will pay for it'. Now they are starting to do this, to think about it, and I think it will work. Why should I pay money in Tbilisi or something when I can get it in Juta, and they can produce it?"* (GH1). However, according to the representative of the Rooms Hotel, the people who know about the demand from the tourism sector are also not necessarily interested in producing more: *"Because you know to work on the land is hard, nobody wants to deal with the land, again it is not easy, in terms of the money, you cannot get a lot of money from it, so people are trying to do something that would give them revenue right away and not to mess with ground and dirt"* (H1).

Subcategory 3.2 Sourcing of agri-food products at hotels and guesthouses

Out of 546 codings in total, and out of 122 of the main category "Linkages between the agri-food and the tourism sector", 36 codings can be attributed to the subcategory "Sourcing of agri-food products at hotels and guesthouses". This subcategory contains data on regional products offered by local shops, restaurants, guesthouses and hotels and the way that these products are sourced. Information was mainly provided by the representatives of Rooms Hotel and Zeta Camp. The local products mentioned by the interviewees which are sourced locally are different types of meat, potatoes, lettuce, fish, herbs, herbal tea (for example Deka tea, which is tea from Rhododendron Caucasicum), cheese, greens, carrots, cabbage, onions, garlic, sea buckthorn, honey and bread. However, not all of these are sourced by all of the interviewees due to legal issues and food safety requirements (see subcategory "Requirements of the tourism sector with regard to local agri-food products").

In addition, it was remarked by the representatives of Rooms Hotel and Zeta Camp that some of the products can only be bought in some months of the year due to a seasonal supply gap. During the time of the gap, products are also sourced in other regions, or in cities such as Vladikavkaz or Tbilisi. This applies for example to potatoes. Nevertheless, if locally produced potatoes are available, the representatives of Zeta Camp and Rooms Hotel buy them. In the case of the Rooms Hotel, the producers usually call the hotel and ask if the hotel wants to buy their potatoes.

In some cases local products which are offered are produced by the owners of the local restaurants or accommodation providers themselves: *"Mostly small guesthouses are trying to supply tourists with their own products like milk, cheese, [...]"* (E3). In other cases, local service providers source their products from local producers. The representatives of Zeta Camp and Rooms Hotel also mentioned that they buy local cheese from people who they trust. However, the Rooms Hotel generally does not buy local milk due to concerns regarding the quality and hygiene. In addition, cheese is only bought from one producer due to concerns with regard to the quality of the product: *"[...] the quality is changing sometimes because it is produced in the family, it cannot be very clean and so on. We have only one supplier with cheese [...]"* (H1).

Zeta Camp also sources milk products from only two local women, and the amount available is not always sufficient: *"For example the milk products, we buy cheese in Juta and it's not enough [...]"* (GH1). Raw milk is mainly sourced from outside the region. Other dairy products are also sourced from outside the region; in the case of the Zeta Camp, an example of this is Matsoni, a type of yoghurt, which is simply not produced in a sufficient amount in the region: *"For example the milk products, we buy cheese in Juta and it is enough, but like Matsoni [...] we buy it in Tbilisi [...]"* (GH1).

As there is no slaughterhouse in the region, the Rooms Hotel is not able to buy meat locally. Some local guesthouses or shops still buy local meat that is produced without an official license because they trust the producers: *"[...] we also bought meat there, [...] the local people they know that it is healthy, so we just trust it"* (GH1). Other guesthouse owners who also keep livestock offer meat from their own animals. In contrast to meat, local trout, which is raised in the local rivers and sold fresh, is bought by Rooms Hotel.

Usually, Zeta Camp and Rooms Hotel source honey from people they know in Juta or in Stepantsminda, but not in Gudauri due to the inferior quality there. The representative of Rooms Hotel also stated that the season when honey is bought is essential with regard to the quality: *"[...] we buy it in the summer because in the winter it is not the real honey, they add some sugar in it. We buy it from our employee"* (H1).

Vegetables or lettuce are also partly sourced locally. For example, in summer, Rooms Hotel buys local lettuce in Sioni and Sno. In order to ensure the quality of the product, staff from the Hotel visit the producers and check the production process and food safety conditions, and they also sign a contract. As 20 to 30 kilograms are needed per day, they only buy from bigger producers and not from small-scale growers. In winter, lettuce is bought in Tbilisi. Zeta Camp is also interested in buying local lettuce as well as local greens.

While the representative of Zeta Camp indicated that they collect local herbs for tea themselves, the representative of the Rooms Hotel stated that they buy it from other people, but package it more professionally themselves at the hotel: *"[...] we buy the raw product, we buy actually the tea already because these ladies bring it in bags, then we put it in the glassware [...]"* (H1). Sea buckhorn is also sourced locally by Zeta Camp and Rooms Hotel. Rooms Hotel sources sea buckthorn from their local staff, who also collect it. In order to ensure that the whole procedure is clean, the jam is prepared in the kitchen of the Rooms Hotel.

In most cases, the basis for procuring products locally is a personal relationship between the buyer and the producer, as explained by the representative of the Rooms Hotel: *"We go there, when we start the relationship we go there and we check how do they produce it [...]"* (H1). While some food products are bought from employees, other are bought from providers who contacted the hotel when it was built. If the agri-food producers deliver their products directly to the Rooms Hotel, the quality control takes place at the hotel: *"We have a delivery room on the property [...] the chef is coming out, he receives the goods, he inspects that it is proper, it is fresh, then they sign a special document which is required for the payment, for the tax and the payment and the accounting is then transferring money or giving cash"* (H1).

There are different variants of paying for the sourced products. According to the representative of the Rooms Hotel in some cases the producers are paid immediately (e.g. in the case of trout), while in other cases the producers are paid on a monthly basis (e.g. the case of bread, which is also sourced from a local bakery in Stepantsminda).

Subcategory 3.3 Requirements of the tourism sector with regard to local agri-food products

Out of 546 codings in total, and out of 122 of the main category "Linkages between the agri-food and the tourism sector", 25 codings can be attributed to the subcategory "Requirements of the tourism sector with regard to local agri-food products".

Selected citations	Paraphrases
“The quality, quantity, because we need a lot, I don’t know, I think these are the two most important points” (H1).	The quality and available quantity of a product are the most important requirements.
“[…] to sell to hotels or any kind of business operators that are following food safety standards you have to be a registered producer you have to issue the invoices, you have to pay taxes […]” (E4).	To sell to actors of the hospitality sector which have to meet food safety standards, the producers must be registered and work with invoices and pay taxes.
“[…] we need a 100 % supplier which can supply us […]” (H1).	Suppliers must be reliable.
“[…] the problem is they are not stabile, how to say, not stabile, maybe sometimes they have it or they don’t have it […]” (GH1).	One of the problems is that producers are not able to always offer the same quantity of a product.
“[…] the food should be safe and must be safe” (E3).	The food products must comply with food safety standards.

The representatives of the Rooms Hotel, Zeta Camp and Goodwill supermarket mentioned that the quality of a product is an important requirement for them. Three experts (representatives of Elkana, PIN, Zeta Camp) pointed out that proper documentation is needed in order to be able to buy locally produced products. According to the representative of Elkana: *“Probably as far as I know, big hotels buy everything in Tbilisi because they need this documentation for taxation”* (E3). Four experts (from FAO, Zeta Camp, Rooms Hotel and Goodwill) also stated that they need a constant amount of a product and sometimes have problems with regard to the quantity that is available from small-scale agri-food producers. In addition, in order to be supplied with the required quantity the buyers might have to deal with several producers at the same time. However, this might also cause problems, as remarked by the representative of FAO: *“[…] but I think it is again a problem of the quantity and the timing of delivery, because the guesthouses and the restaurant prefers to have it when they want to and during the season, the whole year I mean, so it is a bit complicated and difficult for them to deal with 100 farmers which 50 of them will bring you the product on the same day”* (E5).

The representative of the Goodwill supermarket was the only person who named the price as an essential factor for buying a product: *“Price is very important, crucial, in our business because we should resell it […]”* (S1). In contrast to that, the requirement that food has to be safe was discussed by five experts (from Elkana, PIN, Zeta Camp, Rooms Hotel and Goodwill). The importance of food safety is also supported by the statement of the representative of the Zeta Camp with regard to milk products: *“Uh yes, food safety, I think that this like laboratory or something is really important for such places, it is really important”* (GH1). Three of the abovementioned experts also added the information that meat must be bought from a slaughterhouse, which is closely related to food safety requirements: *“[…] if you take meat,* *you cannot buy, because by Georgian law you have to have the slaughterhouse where you actually kill the animal and inspect it and sign […]"* (H1). [88]

Like the representative of Goodwill, the representative of the Rooms Hotel also remarked that certain products must be organic in order to be bought and offered by them. This applies for example to local honey and tea at the Rooms Hotel (H1). While for the representative of Goodwill the visual appearance of a product is also important, the representative of the Rooms Hotel remarked that: *"[…], I can understand that the berries or strawberries cannot be very nice if you look at them because they are very organic, but the taste of them would be really different"* (H1). The representative of the Goodwill supermarket also added that the packaging of a product is a relevant factor.

Subcategory 3.4 Other hurdles with regard to linking the agri-food sector and tourism

Out of 546 codings in total, and out of 122 of the main category "Linkages between the agri-food and the tourism sector", 18 codings can be attributed to the subcategory "Other hurdles with regard to linking the agri-food sector and tourism". In particular the representative of PIN could provide a lot of information on hurdles with regard to linking the agri-food and tourism sectors. One of the restricting factors for linking the sectors might be the quantity of products which are available in the region. According to the representative of Elkana it might even be problematic for the local households to cover their own demand with quantities that they produce: *"Their little amount is not enough for tourists, and little amount is not enough to hold your household and to have some income"* (E3). The representatives of Zeta Camp, Evoluxer, PIN and one representative of FAO made statements on shortages in the food supply of the region, either with regard to the lack of shops, restaurants or the general availability of food to buy. One example was provided by the agribusiness expert of Evoluxer: *"[…] some guests from Poland they went there for hiking and they said there is a shortage of food, they don't have proper shops there to buy things, […]"* (E8). The representative of PIN also stated that it is difficult for tourists to find places to buy local products: *"[…] during the winter time, right now if you go there the local shops are almost empty. […] tourists are also hinting 'where is the local cheese, where local product, where is something local?'"* (E4). This situation contributes to the fact that some tourists even bring their food with them from Tbilisi: *"At this time it is very difficult to find a place where you can buy something. […] people they just buy everything in Tbilisi and bring it on this way just to have something to eat"* (GH1).

In addition to that, there are only a small number of restaurants in the region, and advice is needed in order to find the right place to eat. A representative of the FAO was even aware of only one restaurant offering *"normal food"* (E5). The poor infrastructure and transport situation adds to the hurdles: *"Killing the spread of the tourism to other villages because, come on, tourists understand that if he will overnight somewhere in for example Karkucha and he wants a bread fresh, there is no bakery and there is no transport to get to the nearest one"* (E4).

[88] These statements on requirements with regard to milk and meat products are reflected by a relatively high number of overlappings of codings of these categories (6 overlappings in the case of dairy products and 4 in the case of meat).

According to several experts, in general it is very difficult for tourists to get information on the region and its offers because *"[...] there is no information nowhere"* (E3).

As remarked by the representatives of Elkana and PIN, besides such infrastructure hurdles the lack of knowledge on marketing products might be an additional restriction. Moreover, the low variety of dishes and products is a hurdle for linking agriculture and tourism (e.g. the rare offer of dishes without meat: *"[...] a lot of tourists underline that they are tired of eating meat"* (E4)). According to the representative of PIN, this situation is made worse because there are no cooking classes offered and the language barrier restrains the local population from taking advantage of cooking courses on the internet.

Subcategory 3.5 Ideas of linking the agri-food sector and tourism

Out of 546 in total, and out of 122 of the main category "Linkages between the agri-food and the tourism sector", 27 codings can be attributed to the subcategory "Ideas of linking the agri-food sector and tourism".

Selected citations	Paraphrases
"So I think that if local people organize a cooperative and actually do their own market and promote their own food, that will be very interesting and all the tourists walking around the center of Kazbegi they will see all this products" (H1).	Marketing local agri-food products via a cooperative in the center of Stepantsminda would be a good opportunity to present the products to the tourists.
"So probably such kind of cooperative for food souvenirs can also be interesting, and of course when I am a tourist and looking for some information, I will visit such kind of place" (E3).	Food souvenirs could also be offered via the cooperative; this would also make them attractive to tourists. Such a selling location would also be a central place for tourists who need information.
"[…] they will also need to have some kind of access to the tourists, so maybe a small market place on the road?" (E5).	Market stands at the road side could also be a way to approach tourists.
"Like the farmers are producing for example cucumber and they are contracted by their locals, from the guesthouses and they are buying. So they are exchanging, I mean you know, they are saying produce this one and I am going to buy it from you" (E1).	Guesthouse owners inform the farmers about a certain product they need and want to buy in the future, then enter into a contract with the farmer who afterwards produces the product for the guesthouses.
"So there will be a map with the touristic sightseeing including mapped points where you can, tourists you can buy certain products locally produced. This will be mainly farms. It not necessarily should be a shop or some retail (inc.)" (E5).	A map will be created where tourist attractions are marked but also showing farms or other places where locally produced products can be bought.
"[…] a lot of guests just want to try to make this food themselves, so they want to try to make Khinkali or they want to try to make Khachapuri etcetera" (H1).	Many tourists are keen on cooking local dishes themselves and try to prepare Khinkali or Khachapuri, for example.

Five experts provided their knowledge and opinion on a shop for selling regional agricultural products in the region.[89] The idea to establish such a shop was generally supported by the experts and they affirmed that it could be interesting for the tourists who visit the region. The representative of Elkana also supported the idea of the establishment of a cooperative shop: *"[…] I think establishing some local cooperative will be very interesting and tourists also will visit some local shop […]"* (E3). This expert suggested Stepantsminda as a location for the shop, as it could be easily found by the tourists there. According to the expert from GFA, such a *"farmer shop"* would need a good management – also in order to make sure that the products offered are really from the region and not imported from somewhere else. In addition, one

[89] Both the terms "farmer shop" and "cooperative shop' as well as the term "cooperative" were used without clearly defining them. However, the general idea behind it is that several farmers cooperate and sell their own products in a shop they run together (in some cases this information was provided to the interviewees by the interviewer).

expert from FAO stated that a cooperative shop not only should offer a sufficient amount of one certain product but should also offer a reasonable variety of products in order to be successful. Furthermore, all structures should be kept *"[...] as simple as possible"* (E5).

The experts also provided information on "food souvenirs", a term used and described by the interviewer as *"something small like an agri-food product that tourists can take home for their relatives"*. According to the representative of Zeta camp, products like wine, beer, honey and herbs could be interesting for the tourists. This person also owns a souvenir shop outside of the region and was convinced that *"Everybody wants something from Kazbegi or Gudauri"* (GH1). The representative of the Rooms Hotel also informed the interviewer about a souvenir corner that is planned at the hotel: *"This souvenir corner is not made for the local products, but what we include there will be the local herbal teas in small cases and local honey"* (H1). In another region of Georgia, Elkana is establishing a *"honey house"* where locally produced honey is sold. However, as stated by the expert, at the moment there is no place in the Kazbegi region where locally produced honey can be bought officially; consequently, such a *"honey house"* could also be interesting for this region and might help to *"[...] increase popularity of this local honey"* (E3).

In addition to a shop run through a cooperative for example, establishing market-places could also be an option for linking producers and buyers or end consumers. One example was provided by the representative of the GFA. This interviewee gave some insights on a monastery in the Samtskhe-Javakheti region in the South of Georgia which was renovated by the government and which now rents out spaces for selling products. According to this expert, with such infrastructure in place, small-scale agri-food producers would be able to sell their products – in the best case in line with food safety standards – and can afterwards pay the rent for the selling spaces: *"It might be the owner, the local government and the farmers, for example in harvest time or summer time, can rent this area and sell their product in a proper way according to the HACCP standard etcetera and later pay the fee"* (E1).

Outdoor selling points for linking the agri-food sector and tourism were also mentioned by the experts. For example, the project manager of FAO (E5) suggested the establishment of market stands at the road-side which are easily accessible for tourists. In addition, the expert from Elkana suggested to open small cafés at the road-side between Sno and Juta and to sell local food to the tourists there: *"For example in the middle of the road there is a village Karkucha, they can offer some fast food to the tourists, but they, I don't know, don't think about that, don't know how to make this, because they have some cattle and produce this cheese, it is very easy for them, for example to make a little café with Khachapuri and some hot drinks like tea and coffee"* (E3).

Another example of linking agriculture and tourism was provided by the representative of the GFA from the Lentekhi district. There, before the production starts, local agri-food producers are asked by local guesthouses to produce agri-food products that the guesthouses need, and these products are then bought by the guesthouses after the harvest. Through the use of such contracts, the value creation stays in the region and it is an opportunity for both the producers and the consumers: *"[...] she buys 1 kg of cheese for example in summertime for 5 Lari and this Khachapuri which she makes she sells for one Khachapuri for 4 Lari. And from 1 kg of cheese you can make 4 Khachapuri, so that is value chain for them. That is what I see as an* *opportunity, because for mountainous region it is very, very hard to bring products here"* (E1). In the following, this type of linkage is called "contract farming".[90] However, although speaking of "contract" farming here, in the case of Georgia this should not be taken literally since, according to the representative of GFA, in Georgia a word is sufficient and a written contract is not necessarily needed: *"[…] in Georgia formal contract, word means the contract […]"* (E1).

Another interesting example was provided by the project manager of FAO from the town Tsalka in Georgia's Kvemo Kartli region. According to the interviewee, the region is more suitable for agriculture than Kazbegi, however similar products such as potatoes, cheese and honey are produced there. For this region, a map has been created showing the location of tourist attractions and also locations where locally produced products can be bought, for example the houses of the agri-food producers: *"So the whole idea is that when you go there and you spend some time there […] you don't bring your food from home but you procure it on site"* (E5). According to the interviewee, no investment from farmer side is required to start this type of linkage since the consumer buys directly at the farm gate. This idea was supported by the representatives of Elkana and Zeta camp, who stated that only some very basic information and maps exist about the Kazbegi region and agreed that such a map could be quite helpful.

The representative of the Rooms Hotel described similar plans for the future: During hiking tours offered by the hotel, guests will have their breaks at guesthouses which are located close to the hiking route and they will be provided with local food there. At the same time, the guests will have the opportunity to participate in preparing dishes with the owners of the guesthouses: *"[…] for example they go to the Gergeti Trinity Church, they see the church and on the way back they stop in that family and they going to cook, either cook or just eat the local food, because somebody would like just to participate in the cooking and then eat their own food"* (H1).

Also, according to the project manager of FAO, depending on the product, watching how agri-food is produced or participating in the production process might be interesting. For example, with regard to cheese, this expert stated that *"[…] the production process is not that fascinating […]"* (E5), however honey might be interesting for that. In general, according to this interviewee, participating in or watching how the food is produced might probably be more interesting for foreign tourists than for Georgians.

The demand in Gudauri was also mentioned with regard to linking the agri-food sector and tourism. This demand might increase, as according to the agribusiness expert of Evoluxer, a new Radisson Hotel will be built in Gudauri in the course of 2017: *"And this Radisson is of course the biggest chain, also they have Marco Polo the second one build by Austrians, and also some small scale hotels, lots of them and all of them need food"* (E8). Within the Kazbegi region, the plan of the Rooms Hotel to develop a skiing area close to the hotel might not only

[90] This term is used since the described situation is in line with the definition of contract farming according to Abbott (1993, p. 370; see also chapter 3.2.2): "Contract farming may be defined as agricultural production carried out according to an agreement between farmers and a buyer which places conditions on the production and marketing of the commodity".

lead to more tourists in winter, but also to a higher demand, as noted by the representative of the hotel.

Category 4 Organic production and special dishes

Subcategory 4.1 Certification

The subcategory "Certification" received 14 codings. The majority of the information was provided by the representative of the company Caucascert, which offers organic certification in Georgia.

In order to receive a certificate for organic production, the farmers must go through several inspections, ranging from regular to unannounced inspections (E7). The price of the certification process depends on the amount of the product to be certified and the remuneration for the inspectors, who receive 120 USD per hour. The expert provided an example of the estimated costs for an inspection for wild collected spices. Including inspection time, time for elaborating the report, and personnel and transport costs, one inspection could amount to around 800 USD (E7). As remarked by this expert, due to the high costs the investment in certification therefore only makes sense if a certain scale of production can be reached: *"[...] you know assigning small farmers who can produce maybe 1 kilogram of some spice or something, it is not a good idea"* (E7). According to the expert from Caucascert, several products from the region might be suitable for organic certification. Among these are meat, wild herbs, berries and spices, as well as trout.

Currently, according to the representative of Caucascert, there is probably no one in the Kazbegi region who produces according to certified organic standards. However, production *"[...] is very close to organic in Kazbegi because the usage of fertilizers and agro-chemicals is very limited, it was almost absent in the previous times, so it is very close"* (E7). The representative of PIN was also convinced that: *"Kazbegi has ideal location and actually condition to be marketed as well as an eco-region and the products accordingly"* (E4). However, in order to tap the existing potentials, advice on how this should be implemented would be needed.

Subcategory 4.2 Role of local or organic products

The subcategory "Role of local or organic products" received 22 codings. Information for this subcategory was mainly provided by the representatives of Rooms Hotel and Caucascert.

Selected citations	Paraphrases
“Among producers, you know most of them know that if you produce organic you can get some premium in the European market” (E7).	Producers know that higher prices in the EU can be achieved if they produce according to organic standards.
“[…] when you say that yes I bought it in Tbilisi in some super market and it is very clean and it is good, they prefer just to have organic food” (GH1).	They [the tourists; author’s note] prefer organic food, even if safe high-quality products from supermarkets are offered.
“[…] 5 years ago, nobody knew about organic production, knew, but not so exactly. Now people prefer to pay more for organic products” (S1).	While some years ago people were not really informed about organic production, today they are even willing to pay a higher price for such products.

Although higher prices for organic products can be achieved on European markets, the economic profitability for an agri-food producer depends on the amount of production, as pointed out by a representative of the FAO (E5).

However, besides the European market, step by step the market for organic products is also growing in Georgia, supported by the government: *“So there is some information spreading in society, many people know that it is good for health and they prefer to buy organic”* (E7). This is also supported by the representative of the Zeta Camp: *“And organic food is getting more and more popular also in Georgians”* (GH1). According to this interviewee, this applies in particular to high income earners. According to the representative of Goodwill, people are also paying more for such products. With regard to local retail stores, the representative of Caucascert mentioned that *“faked organic products”* would be sold, since some of them would be labeled as organic even though they are not certified. However, also during the interviews different terms were used, such as “natural” and “bio”, and the meaning of “certified” was not clearly defined. In addition, the terms “organic” and “local” were also sometimes used interchangeably. This is in line with the statement of the representative of Goodwill: *“In our mind as a customer Georgia means organic, unfortunately people are not exactly aware what is organic product”* (S1). The imprecise use of the term is also reflected by the statement of the representative of Zeta camp on the preferences of tourists: *“I think that they prefer to have organic food, the local one […]”* (GH1). Although the current share of local food at the Rooms Hotel is only small (around 5% according to the interviewee of the hotel), they also plan to offer more local food in the future, as they are convinced that tourists prefer such type of food: *“[…] we want to have a menu which will be only from the food that you can find in 50 km radius, or 70, maybe we will take 100 […]”* (H1).

Though this sounds promising, the representative of Elkana pointed out that the local population still needs advice with regard to organic production: *“They need some, not some, many trainings to know and to understand that if the food is local and ecologically pure, and it tastes well and it tastes safe and it is the additional income to your tourism business, it is very good and it will increase your income”* (E3).

Subcategory 4.3 Special products and dishes

The subcategory “Special products and dishes” received 11 codings. Most of the data was gathered from the interview with the representative of the Zeta Camp.

The two Georgian dishes Khinkali and Khachapuri were mentioned most frequently. According to the representative of PIN, there are also several local variations of these dishes: *“One is Khinkali which Mokhevian Khinkali is a little different recipe because they use local herbs, […]. The second one is actually a type of Khachapuri which has some greens inside, the local herbal thing, […]”* (E4). One local herb which is used regularly in the region is caraway. The representative of Zeta Camp also described that guests are often interested in the local dishes which they prepare, for example a typical Chewsurian dish which contains local wild garlic. In addition, they prepare a traditional dish out of calf blood: *”[…] when they cut the throat, they collect this blood and then boil it, and it is like meat after they boiling, and they also have some different spices inside and then they (laughs) bake it […]”* (GH1). Furthermore, the representative of Zeta Camp mentioned Khabizgina, which is similar to Khachapuri and filled with local potatoes and cheese, and the Tushetian dish Khavitsi, which is made of cooked local cottage cheese, *“like a fondue”* (GH1).

The Rooms Hotel also offers typical Georgian dishes with local ingredients. Among them is Pkhlovani, a Khachapuri-type of bread with local greens and Khachapuri with local cheese and potatoes. In addition, they offer Mchadi, a Georgian corn bread. Most of the above-mentioned dishes are served with local cheese. This is in line with the statement of one consultant of FAO, who noted that cheese from the Kazbegi region is well-known. This expert also emphasized that: *“[…] it will be very interesting for all the tourists to taste the local food there, especially these very specific products they are producing there, quite specific for Georgia”* (E5).

No typical local beverages were mentioned, except a variation of hot Chacha, the Georgian brandy, prepared with local herbs at Zeta Camp: *“[…] we have a hot Chacha on the menu, this is not Chewsurian drink, this is Tushetian drink in Georgia, so we make the Chacha warm and add some spices inside. Every spice is from mountains and it’s local”* (GH1).

Category 5 Cooperation

Subcategory 5.1 Pro cooperation

The subcategory “Pro cooperation” received 18 codings. Most of the data could be gathered from the interview with the agribusiness expert of Evoluxer, who provides consultancy to the ACDA (E8).

Selected citations	Paraphrases
“When they join a cooperative […] they have a cheaper access to input supplies, […] and they can access the wholesale market instead of going directly to the small shops” (E2).	Through a cooperative input supply is cheaper, and the producers do not have to approach small stores but can access also the wholesale market.
“[…] they can join to the purchase of some equipment assets and then share among each other […]” (E6).	Equipment is often bought jointly and shared among the members.
“[…] most of the farmers they understand that without joint work and exercise they cannot compete with the entire market” (E8).	The majority of the farmers are aware that cooperation is imperative with regard to competition.
“[…] during the kolkhoz time the government was coming to your place and taking your cows, land, plot and things like that, but nothing similar happens with the cooperative. That is why they understand that it is totally different” (E8).	At the time of the kolkhozes, the government could seize everything people owned, e.g. cattle or land. This does not apply to today’s cooperatives, and people are aware of the difference.

According to several experts, there are various advantages for agricultural producers who join a cooperative. Among them is the improved and cheaper access to input supply, and higher bargaining power as well as in general better access to markets. The statement of the FAO consultant, who is also involved in the capacity building project of the ACDA, illustrates these points: *“[…] by uniting and consolidating the demand you get better prices for inputs and stuff like this. In addition, you are getting better access to the market, because your volume of production increases by joining these members, […]. Also you get a better chance of connecting to the retailer, big retailer from super markets because usually they don’t want to have business with small farmers, because of the small volumes they produce and stuff like this, […]”* (E6).

Furthermore, through cooperatives better technological equipment could be used, which is also highly relevant with regard to international requirements and support: *“Also through the cooperative, they are able to implement international standards into their production also to use the modern technologies to produce more and to have access to different state or NGO support projects”* (E2). In addition, cooperatives are exempted from certain taxes (E2).

In mountain areas in particular, where small-scale producers have limited opportunities to produce large volumes of output, cooperation might be relevant (E8). Also the representative of the Rooms Hotel affirmed that *“[…] for a business like we own, probably it is better to deal with a legal entity or a cooperative rather than just a physical farmer”* (H1). As noted by the agribusiness expert of Evoluxer, cooperation is also important with regard to international competition, due to economies of scale which cannot be achieved by individual small-scale producers.

According to three experts, cooperatives are only very rarely associated with the former kolkhozes, which is also reflected by the number of newly established cooperatives. However, as described by one expert of the FAO: *“[…] I don’t think they still mix it with the old kolkhozes, but the awareness is there, but it needs certain experience to build on, most of them understand* *what it is but how to make it function in the real life that is another story, so it needs some time"* (E5).

Subcategory 5.2 Contra cooperation

Selected citations	Paraphrases
"Also not just Georgia but in everywhere in the world it is hard to change the mentality of an individual farmer in order to make him think as a member of a cooperative [...]" (E2).	If farmers are used to working individually it is very difficult for them to change their mindset and act as a member of a cooperative.
"[...] because we come from post-Soviet country and after kolkhoz the farmers have been a bit afraid because they don't exactly understand what the cooperation means" (E1).	Due to the former kolkhozes, some farmers were hesitant with regard to cooperation as the concept was not clear to them.
"One of the greatest challenges for cooperatives right now is the lack of education and knowledge in the smallholder farmers" (E2).	One main hurdle for cooperation is the lack of education and knowledge of small-scale farmers.

The subcategory "Contra cooperation" received 19 codings. One hurdle with regard to cooperation that was mentioned by four experts is the mentality of farmers or inhabitants of mountainous regions, as also indicated by the statement of the representative of Zeta Camp: *"[...] but now I think that everybody will prefer to have their own ones and not to be with other. I don't know, because they are really strange, they are mountain people, they have different character you know"* (GH1). According to one representative of the FAO (E5), one reason for this is that people in Georgia are traditionally not used to working together voluntarily. In addition, two experts also pointed out that the past experience with kolkhozes might have a negative influence on today's cooperation, for example, according to the representative of Goodwill: *"[...] they are afraid of cooperatives [...] because government pushed them into cooperatives, so, they don't know what a cooperative is [...]"* (S1).

The lack of knowledge and (farm) management skills could be another significant hurdle (E6). In this regard, it is also a problem to find enough farmers who have the skills to initiate and lead a cooperative, as remarked by the representative of GFA. In addition, cooperation might even entail disadvantages for the farmers, in cases where they produce more than the other members and might be better off with an individual approach (E5).

Subcategory 5.3 Role of trust

The subcategory "Role of trust" received 7 codings. According to six experts, trust is decisive for cooperation. This is summarized by the statement of the representative of the ACDA: *"Trust is one of the most important things when creating a cooperative [...]"* (E2). Due to this fact, according to a representative of FAO (E6) many people choose close relatives or neighbors as cooperation partners: *"[...] that is why for the time being they opt for choosing the cooperative member founder from their immediate surrounding from the relatives, the neighborhood, whom they trust, so this is the case"* (E6).

A lack of trust can thus also be a hindering factor for cooperation, as was pointed out by the agribusiness expert of Evoluxer: *"[...] if they don't trust, for instance when we talk about the management of cooperatives, right, if they don't have that trust to that leader farmer then it is difficult, they won't join"* (E8).

Subcategory 5.4 Situation of cooperation in Georgia and the Kazbegi region

The subcategory "Situation of cooperation in Georgia and the Kazbegi region" received 26 codings. It includes all data and figures (e.g. the number of persons required for the registration of a cooperative) as of the time of the interview.

Selected citations	Paraphrases
"And now the structure looks like this; one farmer and the neighboring farmers, including his relatives sometimes are united under this umbrella of cooperation" (E6).	Cooperatives are sometimes established by farmers from the neighborhood and relatives.
"First level cooperative consists of individuals, physical persons who are primary producers and second level cooperative consists of agricultural cooperatives themselves. So cooperatives can form another cooperative and it becomes second level cooperative for processing" (E2).	Individual farmers who are involved in primary production are members of first level cooperatives; these cooperatives can merge and found a second level cooperative which is responsible for processing.
"They just heard that there is a government program promoting cooperations, so you will get some equipment and according to this information everyone went and registered (laughs)" (E4).	People registered cooperatives only because the government provided equipment for newly registered cooperatives within the framework of a support program.
"Well there is a special agency in the government who is working on the development of agricultural cooperatives, there are certain donors, the EU is supporting cooperatives now through three different NGOs, [...]" (E5).	Support for cooperatives is provided through the agency of the government or donors such as the EU and NGOs.

As described by the representative of the ACDA, first the cooperatives have to be registered at the Ministry of Justice and then the ACDA grants them the status of an agricultural cooperative. With this status, the cooperatives can be supported by state or non-governmental support projects designed for agricultural cooperatives. According to the agribusiness expert of Evoluxer who provides consultancy to the ACDA *"[...] in order to register as an agricultural cooperative you have to be in this business, in primary production in most cases, of course you* *can also be in the processing"* (E8). Besides that, there are not many formal requirements, as described by one consultant of the FAO (E6), except having a bank account and paying the shares to the cooperative. The representative of Evoluxer also described that a cooperative in the mountains could be established by three people, while in other regions five members are necessary (E8). Generally, there are two types of cooperatives: First level cooperatives are involved in primary production, while second level cooperatives are responsible for processing. According to a consultant of the FAO (E6), most of the cooperatives are composed of family members and neighbors.

According to the representative of the ACDA, at the time of the interview there were in total 3,500 agricultural cooperatives with more than 9,500 farmers in Georgia. This expert also provided an estimate of 25 cooperatives for Mtskheta Mtianeti (E2). According to the ACDA, in the Kazbegi region all the registered cooperatives are first level cooperatives. The representative of Elkana provided the information that most of the cooperatives focus on potato production, beekeeping or livestock. Furthermore, there was an idea to establish a cooperative for wool products. In addition, cooperatives for strawberry growing were mentioned by the representative of the ACDA.

According to the representative of PIN, there are also various problems associated with the establishment of cooperatives, such as incorrect incentives associated with the registration of cooperatives. In one case the government supported the purchase of machinery, and people registered the cooperative just for this reason without any real plans. In addition, some cooperatives are composed of actors of different agricultural fields, which makes it difficult to actually produce any output together (E4).

Category 6 Other relevant information

The category "Other relevant information" received 9 codings. This is a main category which has no additional subcategories but collects topics of interest that could not be attributed to the other categories. According to the representative of PIN and the Rooms Hotel, while people work in tourism and agriculture during summer time, many people leave the Kazbegi region during winter time. In addition, families with children leave the region because of the poor educational possibilities. Furthermore, the inadequate infrastructure in mountainous villages, including also the poor internet connection as well as a lack of services and activities leads to people migrating from the area: *"[...] you have to do something that the people will have the same comfort and the services what they have in the big cities. Otherwise you will not have one there and old people will pass away and you will not be able to find others"* (E1).

Regarding the job situation during winter time, the agribusiness expert of Evoluxer involved in the ENPARD project also mentioned that the road to Russia is normally also open during winter time; this could provide certain opportunities with respect to winter and ski tourism. However, one problem with regard to tapping potentials might be the mentality of the local population, as was remarked by the representative of the Rooms Hotel: *"But again if we are talking about Kazbegi where the, you know what kind of people, they are mountain people, [...] so that is very hard to promote this culture and change their way of living"* (H1). In addition, it was mentioned that a certain portion of the population would be too lazy to work and would drink too much alcohol.

4.5 Condensed Results

This chapter contains the essential findings of the implemented qualitative study that are relevant with regard to the research questions.[91] It condenses the results of the exploratory interviews of the pre-study, as well as the results of the focus group discussions and the expert interviews.

The agri-food chain in the Kazbegi region

During all study phases, the interviewees provided the information that in former times a large part of agriculture in the Kazbegi region was vegetable production in greenhouses. In addition, the interviewees of the different study phases confirmed that sheep breeding was popular and that the number of animals decreased tremendously with closing the borders to Russia. While the vegetable production in former times was also geared to exporting, agriculture in the Kazbegi region is currently mainly characterized by small-scale production. However, there are also some market-oriented farmers who produce on a larger scale. As reported during all study phases, a main source of income is the sale of live cattle in autumn.

The following graph structures the information on the actors and relationships of the agri-food chain as well as the main bottlenecks and weak points that were reported by interviewees of all study phases.[92] As the current bottlenecks in the agri-food chain are a relevant starting point with regard to the development of perspectives of the Kazbegi region, they are outlined in detail *before* considering the potential opportunities that are based on changes in the bottlenecks.

[91] Thus, in contrast to chapter 4.4.1 to 4.4.3 the essential results are no longer presented according to categories and results from various categories may be summarized with regard to the research questions. For example, with regard to the research question on the agri-food chain, results from the subcategories of the main category „Agri-food chain" as well as from the category "Linkages between the agri-food and the tourism sector" are included.

[92] It must be taken into account that the data summarized through the graph only reflects data that could be gathered from various people and does not include rare or untypical cases.

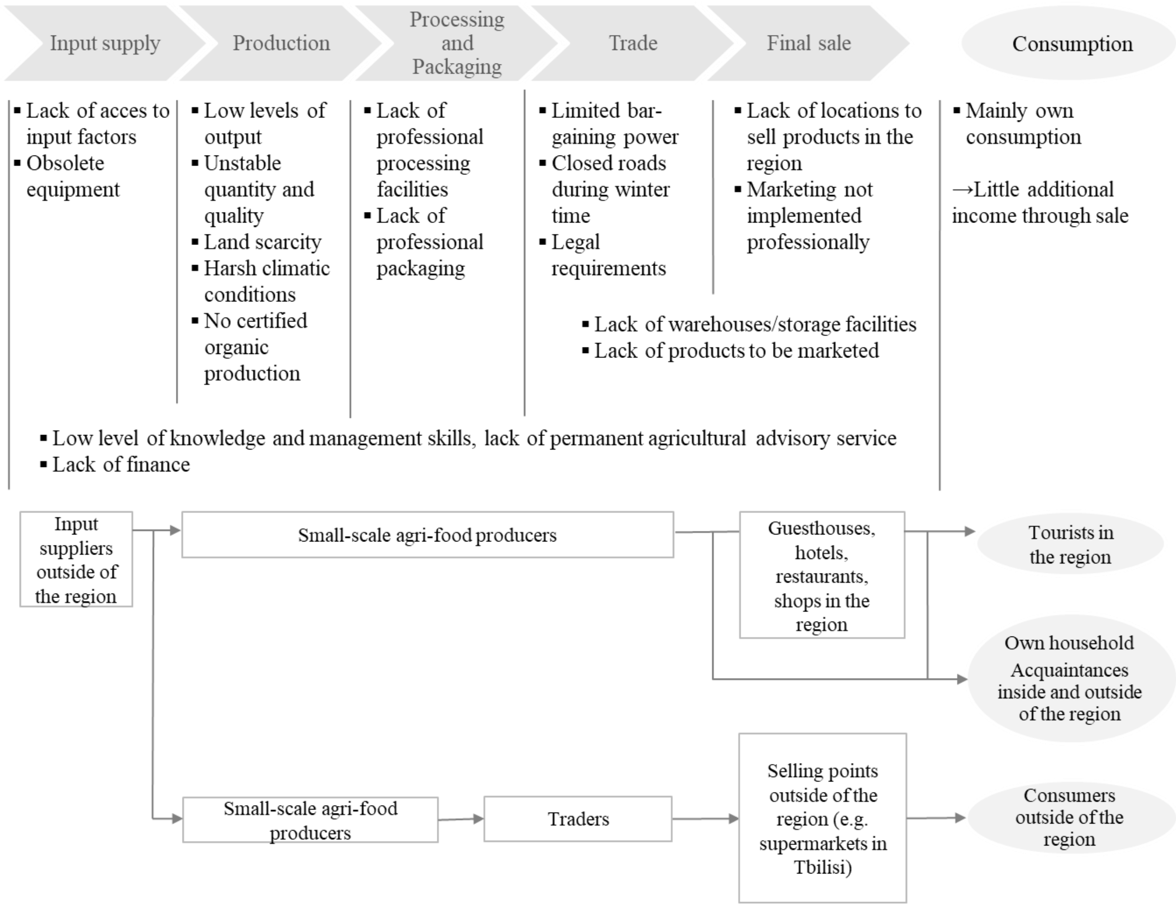


Figure 14: Bottlenecks in the agri-food chain

Source: Own illustration.

As indicated in the graph above, the interviewees of all study phases as well as the observations during the pre-study provided the information that agricultural production in the Kazbegi region is mainly implemented through small-scale agri-food producers. However, although a large share of the agricultural output is consumed by the agricultural producers themselves, a small share is also marketed, e.g. to tourists in the region. In the majority of cases, the small-scale producers are not only involved in the production, but also in the processing or marketing of their products. Thus, the graph above also shows that the number of chain actors or intermediaries until the product reaches the final consumer is very low due to the fact that the producers themselves often cover almost all stages of the chain.

Input supply: All study phases revealed that most of the agri-food producers of the region lack access to input factors such as finance, land resources or manpower, and they use obsolete technical equipment. Furthermore, an agricultural input supply store is missing in the Kazbegi region.

Production: Due to instable or low access to input factors, neither the quality nor the quantity of production is constant. Furthermore, as described by interviewees during all study phases, the production output in the Kazbegi region is negatively affected by the scarcity of arable land and small size of plots. Old equipment further impedes efficient production; for example, in potato production some plots are still plowed with donkey carts. In addition, the prevailing climatic conditions hamper production. As pointed out by the expert of the company Caucascert, so far no certified organic production exists in the Kazbegi region.

Processing and packaging: As reported during all three field research phases, there is a lack of processing facilities and equipment in the Kazbegi region. In particular, in the case of dairy and meat production, the fact that there is neither a slaughterhouse nor a milk collection center is a major constraint. The nearest slaughterhouse is more than 100 km away, which makes it cost and time intensive for small-scale agri-food producers to bring their cattle there, and some of them slaughter animals themselves. However, according to several experts, in order to comply with food safety standards both facilities would be urgently needed, in particular when it comes to marketing products to the tourism sector.

The lack of processing facilities is also a constraint for producing a greater variety of certain products, as well as for adequate packaging or preserving of food. The pre-study and the other field visits have shown that agri-food producers also process products. However, this is mostly done in a traditional and old-fashioned way at the houses of the producers, e.g. extracting honey or processing raw milk to butter and Matsoni. The focus group discussion and the expert interviews also confirmed the lack of professional processing methods and equipment. Since most products are distributed to family and friends of the producing households, professional packaging or labeling normally does not take place.

Trade: Data of all study phases showed, that a small proportion of the agri-food producers' output is sold to traders who then resell the products in other markets, mainly in Tbilisi. The traders either pay the producers in cash or in kind. In the second case, the producers exchange their products (often potatoes or cheese) against household items or food products which are not available in the region. However, according to focus group participants, the bargaining power of the inhabitants of the region is low and in these cases the selling prices are often lower than when the producers sell their products themselves for cash.

Another portion of production which is not consumed by the own household is sold to guesthouses and hotels in the region. However, in these cases legal requirements such as documentation for tax and food safety requirements (see below), often represent hurdles with regard to the establishment of market linkages. Another factor which has a negative influence on trade are closed roads during winter time. Some agri-food products are also exported to Russia, either by traders or by the producers themselves, sometimes illegally.

As mentioned during all field research phases of the study, the lack of warehouses or storage facilities is another bottleneck of the value chain, in particular with regard to marketing. As pointed out by participants of the FGD1 as well as by several experts, the harvesting and selling of one specific product is carried out by all producers at the same time, which thus negatively influences their selling price. One of the main concerns of the interviewees of all study phases was that there would not be enough output to be marketed, as the demand of local households needs to be covered first.

Sale to the final consumer and consumption: As already shown by the exploratory study, the small-scale agri-food producers of the Kazbegi region often consume the products within their own households or supply them to their circle of acquaintances both inside and outside the region; consequently, either no or only very little additional income is generated. Products which are sold to traders who come to the region are usually resold and consumed outside the region. As stated during all phases of the study, inside the region the product may reach the consumers indirectly via local retail shops or restaurants, or also via local hotels and guesthouses. However, as pointed out by four experts, another hurdle is the fact that the infrastructure for supplying food for tourists (as well as local inhabitants) outside of hotels and guesthouses is poor. For example, there are only a small number of shops with a small variety of products, and there is also a lack of restaurants and cafés, some of which are also difficult to find. Furthermore, only a small selection of dishes is offered, which could also be observed by the researcher during the exploratory study. Several experts provided the information that some of the tourists even bring their own food to the region.

Regardless of the type of consumer, the other side of the coin is that for the agri-food producers there is a lack of places to sell products, e.g. market places (participants of FGD2, E4). In addition, as the main location to market products in the region is Stepantsminda, the local transport conditions can also create a bottleneck with regard to the final sale, in particular for people from the surrounding villages. At some guesthouses, goods produced by the owner of the guesthouse itself are offered to the guests. However, this direct marketing from the producer to the consumer is also often not organized professionally (participants of FGD2, E4). As pointed out by interviewees of all study phases, consultancy on professional marketing of products should be provided.

All stages of the chain: All stages of the chain are also affected by the prevailing low level of knowledge, as mentioned by several participants of the focus groups and emphasized in particular by the representative of PIN. This ranges from a lack of educational institutions to a lack of knowledge of production and marketing as well as a lack of advisory services. As pointed out by interviewees of all field research phases, the lack of access to finance has a negative effect on all stages of the agri-food chain.

Opportunities

Although the local agri-food sector is characterized by several shortcomings, the quality of agri-food products from the Kazbegi region was considered to be very high by the majority of the interviewees, in particular by participants of the focus group discussions, who are agri-food producers themselves, but also by representatives of the tourism sector as well as representatives of a trading company from Tbilisi. In addition, several experts identified the availability of pasture land as well as the later harvesting season as a comparative advantage of the Kazbegi region.

Linkages between the agri-food and the tourism sector

The study has shown that tourism is mostly concentrated in Stepantsminda, Gergeti and Juta, while the other villages are dominated by agriculture. According to the interviewees, both of the focus group discussions and the expert interviews, there is a clear separation of involvement in agriculture and tourism in the region, meaning that people who work in the field of tourism are not involved in agriculture and vice versa. Such a separation might be due to the low availability of land in areas where tourism is concentrated, as applies to Stepantsminda and Gergeti (E3), or due to the harsh weather conditions of a location, as in the case of Juta (GH1). However, the interviews and field observations revealed that guesthouse owners in Stepantsminda are also offering products that they produce themselves, which is thus a combination of tourism and agriculture.

According to several experts, an improvement in infrastructure also would be necessary in order to bring tourists to more remote villages. Since tourists are interested in local food products (representative of the Mountain Travel Agency during the pre-study, participants of FGD2 and FGD3, GH1), this might be an opportunity for local inhabitants to increase production and sell agri-food products to the tourism sector (E1, E4, GH1). Nevertheless, not everybody is interested in increasing agricultural production, as agriculture is hard work and money might be earned more easily in other areas (H1, GH1).

Agri-food products in the local tourism sector

According to participants of the focus group discussions and experts, the following local agri-food products are already sourced (or offered from the own production) by the representatives of the tourism sector of the Kazbegi region: different types of meat, potatoes, lettuce, fish, herbs, herbal tea, cheese, greens, carrots, cabbage, onions, garlic, sea buckthorn, honey and bread. However, due to legal issues and food safety requirements, among others, not all of the products are sourced by all of the tourism service providers.

Animal products

During all study phases it was reported that due to the availability of pasture land, keeping cattle is characteristic for the Kazbegi region. This also includes the production of **dairy products**, in particular cheese. However, depending on the perspective of the interviewee, several hurdles are associated with marketing dairy products to the tourism sector. Above all, as already learned during the exploratory field study, there is a lack of a milk collection center or milk processing facility in the region. As reported by participants of FGD3 as well as experts, equipment for processing milk would be needed in order to comply with food safety standards. As pointed out by several representatives of the tourism sector (in particular the representative of the Rooms Hotel) and experts from development organizations, this is a main requirement in order to be able to buy such products, in particular with regard to raw milk. However, during all study phases the interviewees stated that the milk output is low and varies throughout the year, and thus the local milk yield might not even be enough for such a collection or processing center to be economically viable (E1). In addition, while all interview phases revealed that cheese is the main dairy product supplied to tourists, a higher variety of dairy products would be demanded by the tourism sector, e.g. cottage cheese.

Besides keeping cattle, sheep farming is also typical in the region. However, the number of sheep has decreased due to the lack of access to pasture land in the bordering regions of Russia. Furthermore, from the side of the tourists, there is no demand for sheep meat (GH1). In contrast, in the tourism sector of the Kazbegi region there is a high demand for **beef** (FGD2, GH1). However, a general restriction with regard to marketing meat to the tourism sector is the lack of a slaughterhouse in the region. While some guesthouses buy local meat anyway – but only from people they know and trust – others, although they would do that in case there was a slaughterhouse, are not able to buy meat from the region due to food safety standards they have to adhere to (e.g. Rooms Hotel). All study phases also showed that cattle are often kept for fattening on summer pastures and sold alive to other countries in autumn, which also eliminates the problem associated with the lack of a slaughterhouse.

Data on **fish**, which in case of the Kazbegi region means trout, could be gathered during the exploratory field study and from the expert interviews. Extensive investment and knowledge is needed (E4), but local trout is of a very high quality and is demanded by local hotels and guesthouses (interviewee of the pre-study, H1, GH1). Due to the availability of clean rivers it could even be produced organically (E7, H1).

The quality of the **honey** from the Kazbegi region was also praised by the interviewees during all phases of the study. According to the interviewees, for this reason it is a highly demanded product. Some interviewees from FGD 2 stated that local honey could even be sold one year in advance of its production. According to interviewees from all study phases, local honey is also sold to tourists via local hotels and guesthouses. Nevertheless, some interviewees also provided information on hurdles with regard to apiculture: high investment in equipment (3_FGD1), lack of finance for innovative technological equipment (4_FGD3), lack of knowledge of production and marketing (FGD3, E4), no location where honey can be bought by tourists (E3). In addition, the expert from Caucascert mentioned that the use of antibiotics could be a hurdle for marketing the product, which is in line with the representative of Rooms Hotel who only buys organic honey. Information on the packaging of honey was provided by the representative of Goodwill and one expert of FAO (E5). According to the former, professional packaging and labeling would be needed, while the latter provided the information that a less professionally packaged artisan style honey might be the better option for selling it, as it gives the impression of a family-made, organic product.

Plant products

An important plant product in the Kazbegi region is **potatoes**. All study phases confirmed that potato growing has a long tradition in the region. Furthermore, the local potatoes are of a high quality (according to both local inhabitants and experts) and in high demand. They are used for own consumption, provided to acquaintances and other consumers inside and outside of the region and also sold to the tourism sector. While the region seems to be suitable for potato growing (E7, E3), the scarcity of arable land leads to a low yield of potatoes (E4). Related to that, potatoes are not available throughout the whole year and sometimes have to be bought from Tbilisi (GH1, H1, E4). The fact that there are no storage facilities available in the region contributes to this situation, since potatoes must be sold directly after harvest. A warehouse could overcome this shortcoming (E1, 2_FGD1).

Other vegetable production in the Kazbegi region can be divided into **vegetable growing** inside and outside of greenhouses. While in former times many vegetables were grown in greenhouses due to the free provision of gas (e.g. tomatoes and cucumbers), today only a very small amount of vegetables is grown in greenhouses. There are also ideas to reactivate greenhouse vegetable production in the region, for example by investing in energy-efficient greenhouses, e.g. with solar energy (FGD3; E4). However, according to one representative of ENPARD such an investment would not make sense from an economic point of view.

Vegetable growing without greenhouses encompasses for example cabbage, carrots, beetroot, garlic, onion, broccoli, red pepper and others. According to the interviewees of the focus group discussions, local vegetables are very tasty. While several interviewees stated that there would be a high demand for vegetables from the side of the tourists (E4, GH1), other experts had doubts about that (E2, E8).

Growing **lettuce** commercially has been introduced in the Kazbegi region within the framework of the USAID NEO project. As described by two experts (E4, H1), lettuce is not part of the local cuisine and is only bought by local hotels and guesthouses to be offered to tourists. Nevertheless, the quality of local lettuce would be very good (H1) and there would be a demand for it (FGD1, GH1). The only hurdle would be the lack of a refrigerated vehicle for transporting the harvest, as pointed out by a market-oriented farmer of FGD1.

With regard to local **fruits and berries**, most information was provided on sea buckthorn and strawberries. A member of FGD2 as well as an expert from FAO (E5) were convinced of the quality of local strawberries. Strawberries are sold either at the farm gate or to intermediaries to be sold in other places; they could also be interesting for tourists (E2, H1). Sea buckthorn is also related to tourism, since it is already offered at hotels and guesthouses, mostly in the form of jam and juice for tea (H1, GH1). During the focus group discussion with the representatives of the tourism sector, a lot of data on sea buckthorn could also be gathered. Besides the information that there would be a high demand for sea buckthorn, problems with regard to the processing of sea buckthorn due to new legal requirements were also communicated. In addition, it was stressed that advice on the harvesting of the plants would be needed, since lots of bushes in the Kazbegi region are being destroyed through current practices (E4).

According to several experts and members of FGD2, various **herbs** and medicinal plants exist in the region, which can be used for tea or to prepare typical local dishes. The interviewees mentioned thyme, wild mint, Rhododendron Caucasicum, caraway and tarragon. Local herbal tea is already linked to tourism, for example in the cases of Zeta Camp and Rooms Hotel, where it is offered to the guests. Although there would be a high potential for local herbal tea production and marketing to tourists, new equipment and more knowledge on the production process would be imperative (E4). Wild herbs have two characteristics in common with sea buckthorn: Regulations on collecting the plant are important (E4), and they could both be produced organically relatively easily as in wild collection there is no transition period required from conventional to organic production (E7).

Although flour for **bread** is not produced in the region, different types of bread are baked and offered, also to the tourism sector. Among these are also special types of bread such as Khachapuri, offered in local variants.

With regard to local **beverages**, according to a focus group participant and the representative of Zeta Camp, locally brewed beer would be of a high quality (5_FGD2) and tourists would be interested in it (GH1). In contrast to that, others had doubts with regard to local beer production, ranging from the quality to the availability of ingredients (H1, E4, E7).

Potential for organic products

With regard to organic production, the data shows different results. While the focus group discussions revealed that no chemicals are used in agri-food production (5_FGD1) but that the polluted environment should be taken into account (FGD3), the expert from Caucascert provided contrary information with regard to honey (use of chemicals, but clean environment). Nevertheless, this expert was also convinced that in general only low amounts of chemical fertilizers are used in the region.

Table 8 summarizes information on the potential of organic production of certain products in the Kazbegi region, based on the interview with the representative of Caucascert. Other products were not mentioned in relation to organic production.

Table 8: Potential for organic production

Product	Information on organic production in the Kazbegi region
Dairy	All fodder for dairy cows must be organic, also during winter time; enough space in winter stables is needed → Difficult to be implemented in the Kazbegi region
Meat/Veal	Calves for fattening must be kept on the mountain pastures for only one summer (in order to avoid having to feed them other fodder during winter time) → Easy to implement
Trout	Clean rivers are needed and are available in the Kazbegi region → Kazbegi is suitable with regard to organic aquaculture
Honey	No toxic substances are allowed to be used; laboratory test on pesticides, lots of ventilation, lower number of hives needed → Difficult to be implemented in the Kazbegi region
Potatoes	Organic manure must be used, and this is available in the Kazbegi region; in addition, due to the cold climate there is a low activity of viruses. → The Kazbegi region would be a suitable area
Wild collections ▪ Herbs ▪ Spices ▪ Sea buckthorn ▪ Other wild berries	No requirement for a transition period; wild plants are available in the region → Easy to implement

Source: Own depiction based on the data of the interviews.

The expert not only provided information on which products could be relatively easy produced organically, but also remarked that from an economic point of view, for official organic certification – since it is costly – a certain amount of a product is needed. However, participants of FGD2 and FGD3 also stated that organic products are in demand by tourists who visit the region and they would thus try to offer such products.

Requirements of the tourism sector with regard to local agri-food products

Figure 15 shows the requirements that have been mentioned by the interviewed experts with regard to sourcing agri-food products locally. Only one requirement (for proper documentation) also arose during the focus group discussion with the representatives of the tourism sector.[93] The requirements are sorted by the number of codings.[94]

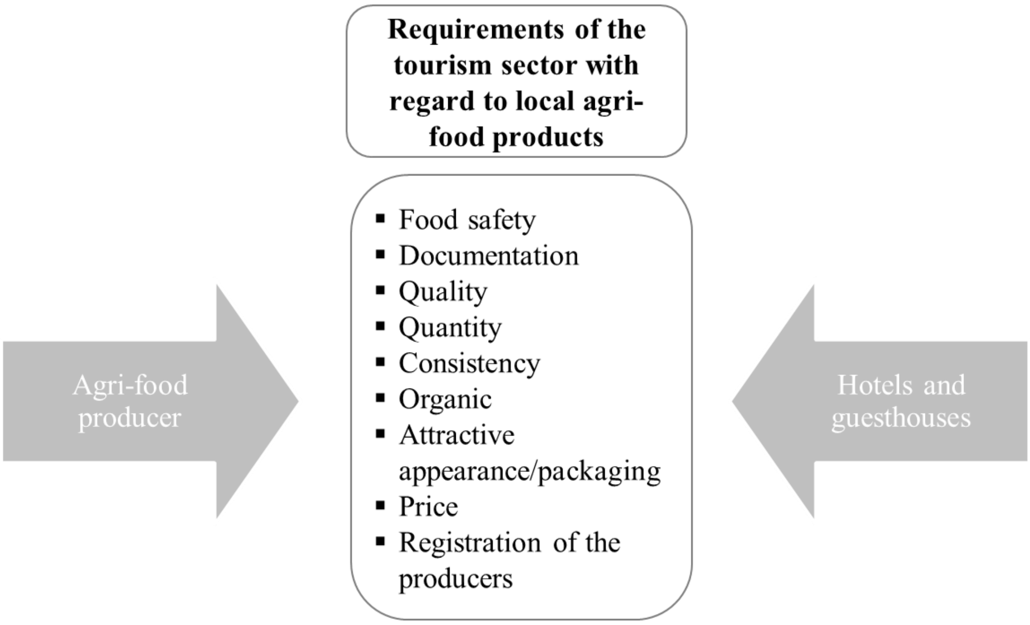


Figure 15: Requirements of the tourism sector

Source: Own illustration based on the results of the study.

The majority of the experts provided data on the first requirements of the graph: adherence to food safety standards, documentation of the procedures, also for tax purposes, high quality and sufficient quantity of products as well as consistency. During FGD2, the necessity for proper legal and veterinary documentation was also expressed. Only a small number of experts identified requirements such as organic production, reasonable prices and appearance of a product or the requirement that a producer who sells agri-food products should be registered[95]. In addition, trust has been mentioned as a decisive factor by representatives of the tourism sector (FGD2 as well as experts) for deciding from whom to buy a certain product, in particular animal products. In general, it has to be taken into account that the requirements among the tourism

[93] However, it must be taken into account that in contrast to the expert interviews, there was no specific question on requirements during the focus group discussions.

[94] Please note that the number of codings for quantity and quality as well as for consistency and organic and also for price and attractive appearance/packaging were the same, respectively. Thus, in these cases the order depends on the arbitrary choice of the author. In the case of documentation, the number was increased by one due to the statement during the focus group discussion.

[95] As the lion's share of the results is derived from the data of the expert interviews, please see the description of the results of the category "Requirements of the tourism sector with regard to local agri-food products" in chapter 4.4.3 for more details.

service providers differ and not all the requirements which were mentioned by the experts apply to all tourism service providers.

Ideas for linking the agri-food and the tourism sector

During the interviews, several ideas emerged with regard to linking agriculture and tourism in the Kazbegi region, which were partly based on experiences from other regions. These ideas are depicted in figure 16.

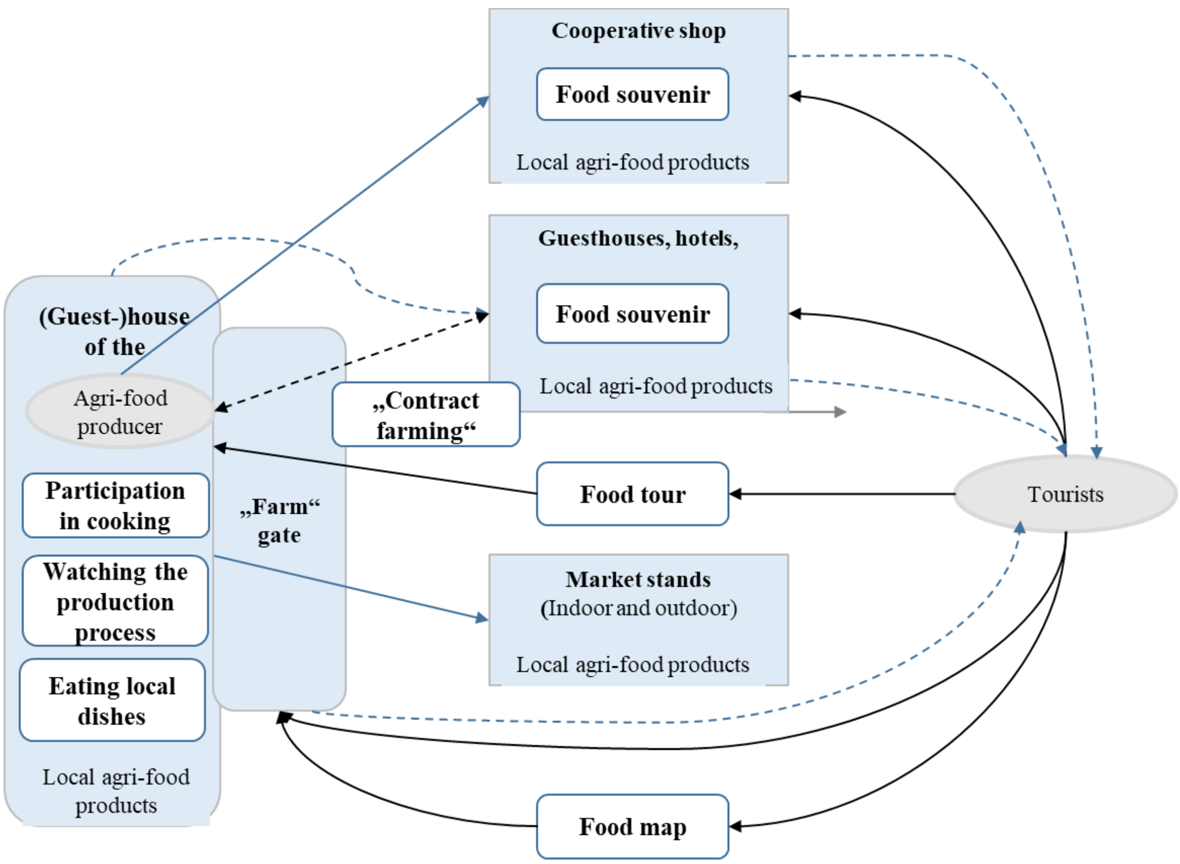


Figure 16: Ideas for linking agriculture and tourism

Source: Own depiction based on the results of the study. Note: Blue: Location where agri-food sector in the form of the agri-food product and the tourism sector in the form of the tourists are linked; Solid blue line: Agri-food producer and agri-food product; Dashed blue line: Agri-food product; Black line: consumer, tourist; Dashed black line: contract, agreement, no flows of products. The size of the forms is not related to any real shares.

In the following paragraphs, the ideas of linking the agri-food sector and tourism in the Kazbegi region are also presented in relation to the results on the agri-food value chain, agri-food products, requirements as well as certification and cooperation. Most of the ideas depicted in the graph above result from the expert interviews. In only two cases, similar ideas were described during the focus group discussions.

Cooperative shop

Several experts had the idea to establish a cooperative shop where local agri-food producers could sell their products. Such a shop, best located in the center of Stepantsminda, could also be attractive for tourists (E3). A participant of FGD2 stated that several agri-food producers could run such a shop together, while working there on a rotating basis. In order to have a functioning cooperative, proper management as well as a sufficient quantity and variety of products would be needed (GFA, E1).

As stressed by focus group participants as well as by six of the experts, trust is a crucial basis for cooperation. For this reason many cooperatives consist of relatives or friends. Four experts also mentioned the mentality of farmers or mountain dwelling people as a hindering factor for cooperation. Members of the focus group discussion saw other hurdles such as formal difficulties in establishing a cooperative. However, although one expert mentioned that people might be afraid of cooperation due to their past experiences with kolkhozes, the prevailing opinion was that cooperatives are no longer associated with kolkhozes and people are aware of the advantages of cooperation. These advantages cover almost all bottlenecks or hurdles regarding agricultural production and marketing, e.g. access to finance or advisory services.

As depicted in the graph above, for the cooperative shop described here, there would be a flow of products from the site of production/house of the agri-food producer to the shop. In addition, also the producers themselves would go to the shop in order to sell the products there.

Food souvenirs

Several experts also provided information on “food souvenirs”. In this regard, honey and herbs were mentioned several times (H1, GH1, E3). While such products could be sold at hotels or guesthouses, another option could be to sell such products in a cooperative shop. The Rooms Hotel has the requirement that products in a “souvenir corner”, which they plan to establish, are organic. Whereas organic production could be implemented relatively easily for herbs, this might be more difficult in the case of honey (E7). The suggested *“small wheels of cheese”* (1_FGD2) could also be a product to be taken home by tourists.

“Contract farming”

Because in Georgia a contract is not necessarily a written document but is often only a verbal agreement (according to E1), contract farming in the heading is enclosed in quotation marks. The idea behind this, as explained by the representative of the GFA, is that owners of guesthouses tell agri-food producers before they start the production which products and amount they will need. In this way the farmer reduces risks, as it has already been agreed that the production output will be sold.

Market stands (indoor and outdoor)

Besides the idea of a cooperative shop which could be run and managed by the agricultural producers, the idea of marketing products at the road side or at market stands inside a building also came up during the expert interviews. The ideas ranged from establishing market stands at the road side to sell products to tourists (E5) to building cafés on the road between Sno and Juta in order to offer some local products there (E3). In addition, market-places where local agri-food producers can rent market stands equipped with all necessary infrastructure such as electricity etc. were mentioned (E1). Such places could be good locations to sell products that meet food safety standards (e.g. HACCP standards), therefore making it easier for the agri-food producers to adhere to the requirements of the buyers from the tourism sector.

Food map

Another measure to link agri-food producers and tourists could be via a food map (E5). The houses of agri-food producers who sell their products at the farm gate are marked on such a map. Since many tourists even bring food from Tbilisi to the Kazbegi region as there is a lack of places to buy food (GH1, E8, E4, E5), a map could help the tourists to procure food onsite and at the same time the agri-food producers would have one more source of income generation without large investment requirements (E5).

Food tour

Both sectors could also be linked via the implementation of food tours (H1). Tourists who go on a hike could take breaks at local guesthouses who collaborate with the organizers of the hiking tours. Tourists would be offered local dishes at the houses of agri-food producers (which could at the same time be guesthouses), and they would have the opportunity to watch or participate in the production process or the cooking of traditional dishes. As pointed out above, depending on the product, tourists might be interested in this. Examples of this could be watching the milking of cows and the production of cheese (owner of a guesthouse in Stepantsminda during the pre-study), trying local home-made honey (5_FGD2), watching the preparation of honey (E5, FAO) or participating in the preparation of local dishes (FGD3, owner of a guesthouse in Stepantsminda during the pre-study). The interviewees mentioned several typical local dishes or rather local variations of Georgian dishes, which could be adequate to be offered to the tourists; among them were: Khinkali (filled dumplings), Khachapuri (bread filled with cheese), Pkhlovani (a variation of Khachapuri with nettle), Qaurma (stew with meat), Mtsvadi (shashlik), Adjapsandal (dish with eggplants), and Khavitsi (cooked local cottage cheese) prepared with local herbs such as caraway or local cheese.

While the results of the qualitative study were condensed in this chapter, the following chapter contains a critical discussion of these essential results, including the development of perspectives of linkages between agriculture and tourism in the Kazbegi region.

5 Discussion

This chapter contains a critical discussion of the study design and the methods and data used as well as discussion of the results. In addition, the results are discussed with regard to the status and perspectives of linking agriculture and tourism in the Kazbegi region in the future. This includes the discussion of two potential scenarios of the development of the Kazbegi region.

5.1 Critical Discussion of Study Design, Methods and Data

The study design, methods and data are discussed along certain quality criteria of qualitative research. A number of authors have developed criteria or tried to apply quality criteria for *quantitative* studies to *qualitative* research approaches (for an overview see for example Elliott et al. 1999). However, this transfer is also viewed critically (Steinke 2008, p. 20). Since being detailed and encompassing a wide range of topics, for discussing the methodological approach of this study, the author refers to Steinke (2008, p. 324-331; 2004, p. 186-190), and discusses the quality of the underlying study along the following criteria: appropriateness of the research process, grounding in empiricism, reflected subjectivity, relevance, inter-subject comprehensibility, and limitations.

Appropriateness of the research process

The **qualitative research approach** has been chosen, since the aim of the study was to openly find ways in which small-scale agri-food producers in the Kazbegi region could adjust their income generating behavior to ongoing changes in the framework conditions for agricultural production. In order to achieve this openness, it was decided not to pre-define answers, which would have been the case when applying a quantitative approach. Furthermore, the aim was to also take into account the context of the research, which is also a reason for applying a qualitative research approach. As the author knew neither the research region nor the interviewees beforehand, a flexible research approach which can be adjusted in the course of the research seemed to be more suitable. Since these characteristics are inherent in qualitative research (e.g. see for openness: Lamnek 2016, p. 238; contextuality: Schreier 2012, p. 22, Helfferich 2009, p. 9; flexibility: Kruse 2015, p. 125), such a qualitative approach seemed to be appropriate.

Within the framework of qualitative research, a **qualitative content analysis** has been chosen to analyze the interview data. Despite the openness of the approach, with the help of the results of the pre-study, descriptive research questions have been developed to provide a specific framework with regard to the study results. According to Schreier (2012, p. 42), in order to answer such descriptive research questions, a qualitative content analysis is a suitable approach. The core of a qualitative content analysis is a category system. This and several other features (e.g. purposive sampling) of qualitative content analysis are also characteristics of Grounded Theory Methodology. However, since the aim was not theory formation, which is a core feature of the Grounded Theory Methodology (see e.g. Mey and Mruck 2011, p. 23), but to answer the research questions, the qualitative content analysis has been chosen for this study.

As pointed out above, the author did not have much background knowledge on the framework conditions in the Kazbegi region. For this reason, it was decided to implement a pre-study, encompassing informal exploratory interviews and observations. Not recording the interviews and conducting them in a similar way to informal chats was suitable because the interviewees did not yet know the author, and filming or recording without first creating trust might have been inappropriate. As the aim was to get a broad overview of the situation onsite, only guiding questions were developed. The fact that the pre-study was implemented in close cooperation with the Georgian project partner contributed to additional insights on Georgia and its culture.

It was decided to implement **focus group discussions** with different groups of the local population in order to gather more detailed data on the research questions. The focus group discussions also allowed the application of an open research approach. Furthermore, the focus group discussions made it possible to interview several people at the same time, which was also appropriate from a financial point of view. In addition, focus group discussions are considered to be a participatory approach (Schulz 2012) which was suitable for developing perspectives for the Kazbegi region bottom-up.

While focus group discussions seemed to be an appropriate method for the objective of this stage of the research, several hurdles arouse while implementing them. Firstly, the author could not guide or moderate the discussion herself due to a lack of Georgian language skills. Hence, the author tried to familiarize another moderator with how to implement the discussion (in line with the recommendation of Kruse et al. 2012, chapter 3.1). However, the author was still the person with more background knowledge on how focus group discussions should be implemented, and also had more knowledge than the moderator with regard to the guiding questions and topics and their relation to the research questions of the study. This knowledge is essential in order to guide discussions and ask follow-up questions if a topic has not yet been sufficiently covered in a way that will answer the research questions. Thus, though valuable data could be gathered, it was not as comprehensive as expected.

A second hurdle was that the composition of the groups was different than planned (see below under sampling). Furthermore, the duration of the interviews was not as long as expected. In particular, FGD3 with the small-scale agri-food producers, with a duration of approximately half an hour, was much shorter than expected. This might have been for several reasons, such as the type of questions, the type of moderation, or also the interviewees. Most probably it was a combination of these factors, and other stimuli implemented in a different way might have led to a longer discussion and thus also to more data. The decision to use only a simple stimulus such as a discussion guideline was based on the fact that the moderator of the focus groups also had to be introduced to the topics and the stimuli.

In addition, during the focus group discussions some participants were much more dominant than others (e.g. 5_FGD2). Although the general atmosphere during the discussions was relaxed, this dominance might have led to less information from other, less dominant people. Since a focus group is composed of different individuals, a variation in the time that each individual speaks is a general characteristic of a focus group discussion. However, this might also influence the results of a focus group discussion and lead to a bias with regard to the statements of one person. According to Adato and Meinzen-Dick (2007 p. 44) this is one of the disadvantages of focus group discussions. Hence, when interpreting the results care was taken not to give more weight to the statements of the more dominant participants. Nevertheless, although the dominance of these individuals was considered a negative factor as regards the discussion atmosphere, in some cases they also provided more information, which was also relevant, than others. Thus, the data they provided still occurs more often in the results than others.

Besides interviewing the local population, an additional objective was to add an expert view to the results. To this end, the implementation of so-called "**systematizing expert interviews**" (Bogner et al. 2014, p. 24) was chosen. The expert interviews were mostly implemented by the author herself in English language. These interviews not only provided the opportunity to fill in gaps in the information which were not yet covered through the focus group discussions, but the expert interviews also allowed comparison of the data gathered in the course of the focus group discussion with the opinions of the experts. It was shown that the expert interviews confirmed a lot of the information which was provided during the focus group discussions. However, in contrast to the focus group discussions that were implemented with inhabitants of the region, the experts contributed to the results with a meta-perspective, since they were mostly based outside of the Kazbegi region. Both the discussion guidelines for the focus group discussions and the expert interviews were developed along the "CCSS principle" (corresponding to the "SPSS principle" of Helfferich 2009, p. 182 ff.; for the description see p. 56, chapter 4.1), which provided a sound basis for a structured development of the guidelines.

The **simple transcription** of the interview data applied here (see chapter 4.3) fits to the research questions and type of analysis conducted. Since the aim of the research was to gather informational data and not to go into detail on the type of language used or the meaning and feelings of the interviewees, more comprehensive transcription was unnecessary. In addition, the fact that the interviews had to be transcribed by someone who was not onsite, and that some interviews also had to be translated supported the use of simple transcription rules instead of applying a more complicated method. However, a small challenge was that the person who transcribed the interview data of the expert interviews was not familiar with Georgian expressions and terms (e.g. terms for food products), which due to the focus of this study occurred quite often. However, the academic background of the person transcribing the interview was suitable for the implementation, and also most of the Georgian expressions could easily be corrected by the author.

The author tried to sample the interviewees step by step in the course of the research process. As the researcher did not yet know the region and the potential interviewees, the interviewees during the exploratory story were sampled by applying a snowball **sampling** approach. During the main phases of the study (focus group discussions and expert interviews), the researcher tried to apply a purposive sampling. The aim was to interview people who could potentially provide information on one or several stages of the agri-food chain and on the demand of the tourism sector. In the case of the focus group discussion, the researcher conducted three focus group discussions: one with market-oriented farmers, one with tourism sector representatives and one with small-scale agri-food producers. The interviewees for these groups were already selected during and directly after the exploratory study. Having said this, at the time of implementation several of these selected focus group members were not available. Though other people jumped in spontaneously and contributed to the discussions, the group compositions were different from those originally planned. Thus, though the sampling method was considered to be appropriate *before* implementing the focus group discussion, it turned out that it was less suitable when it came to the implementation. It might have helped to be in touch more often with the people who were invited to participate in the focus group discussions. Nevertheless, the incentive to participate in such a discussion for the local population has been low, also due to the fact that in line with the project budget no financial incentives were provided for participation and only food was offered to them. In the case of the expert interviews, the purposive sampling was successfully implemented, and the interviews took place as planned. However, also in case of the expert interviews some interviews were shorter than expected (e.g. the interview with the representative of GFA, E1), while other interviews were much longer than expected and also more information was provided (e.g. the interview with the representative of PIN, E4).

Grounding in empiricism

According to Steinke (2008, p. 328), theories should be grounded in empirical data. As the aim of the research was not to develop a theory, the author applies this criterion to the study's results and conclusions. All results and conclusions derived in this study with regard to the *status* of linking agriculture and tourism originate from analyzing the text data of the interviews and are substantiated by citations from the gathered data.

While the results with regard to the status of linking agriculture and tourism are clearly grounded in empirics, this does not apply to the same extent to the results with regard to the *perspectives* of linking agriculture and tourism in the Kazbegi region in the future. In order to develop scenarios for the potential development of linkages of agriculture and tourism in the Kazbegi region, the author disengaged the description of the scenarios at least partly from the empirical results, in order to be able to explore future developments (see chapter 5.3).

With regard to coherence of the results, as recommended by Steinke (2008, p. 330), when condensing the results in chapter 4.5, contradictions of the different study phases were pointed out and are also discussed in chapter 5.2. Furthermore, also when presenting only the results of the focus group discussion or the expert interviews respectively, the author tried to describe contradictory issues with the help of citations of the interviewees.

Grounding results in the empirical data is closely related to the process of **coding**, since the results stem from the statements of the interviewees. These statements have been structured with the help of the category system through the codings of the researcher. This led to a certain number of codings per category as well as per expert. For example, the representative of PIN (E4) has the third highest number of codings. This is probably correlated with the fact that at the point of the interview this person was involved in a development project onsite in the region. Thus, in addition to an outside view that the expert has due to not being an inhabitant of the region but an external consultant, the expert has an in-depth knowledge of the situation and the problems of the local population. The highest number of codings can be assigned to the representative of the Rooms Hotel and the second highest to the Zeta Camp in Juta, which are also active both outside and inside the region.

In this study, in line with the recommendation of Schreier (2012, p. 198 f.) the coding process was implemented several times by the researcher herself. However, it must be admitted that it might have been better if more people had been involved in the coding. Nevertheless, due to personnel constraints such an approach has not been possible in the course of this study but would be recommended for future studies.

Reflected subjectivity

The author tried to take into account her own background, biography and context when preparing and implementing the study and interpreting the results. In addition, in an attempt to be reflective about her own role, a self-observation was conducted after each research step. At first sight, the personal pre-conditions of the researcher with regard to the implemented study were not optimal. The main reason in this respect was that the researcher is not Georgian. This fact not only might have led to less trust and more difficult accessibility to the research field, it was also a hindering factor due to the lack of language skills (see the paragraph on qualitative research in foreign languages below).

The other side of the coin is that this might have led to more openness of the interviewees, as they were happy that someone from abroad was interested in their situation and activities. Furthermore, they knew that the researcher was not from a company or organization but from a university. They might thus have provided more information than they would have provided to someone who is more aware of the situation there, or who could even use the data for competitive purposes.

Nonetheless, the background of the researcher might have influenced the aim and the underlying assumptions of this study. By trying to find a way for small-scale agri-food producers to sell their products, it was implicitly assumed that there would be enough output to be marketed. However, the results show that this is not the case. This implicit assumption might have been made due to the background of the researcher, who lives in a country where a lack of agricultural output is not common. This might have resulted in the author thinking less about the situation of agricultural output than on how to potentially market products.

As regards reflexivity, the author’s background must also be taken into account with respect to the coding and the citations selected for the presentation of results. This also applies to the translators and transcribers of the interview data, as their subjectivity also has an influence on the data and may thus have led to a bias.

Relevance

As described in the introduction, the small-scale agri-food producers have to cope with several changes and challenges in the Kazbegi region, while the growth in tourism might at the same time offer opportunities for them to sell their products. However, this is still hampered by many factors. Providing detailed information on current hurdles and opportunities in agricultural production, the study might contribute to improving the income situation of small-scale agri-food producers. Furthermore, the relevance of the study is underlined by the fact that not only the livelihoods of individual persons are affected but the development of the region as a whole.

Providing more data on linkages of agriculture and tourism – as applies to this study – might thus contribute to the development of better socio-economic perspectives for the whole region.

In the case of the focus group discussions as well the expert interviews, a high amount of overlap exists between the category bottlenecks and the marketing and delivery, which shows that marketing-related topics are often mentioned in connection with hurdles and bottlenecks. Looking back at the research questions, this fact might also be an indication of the relevance of this study. However, it must also be considered that a slight bias arises because one focus of the interviews and group discussions and the related questions was exactly on finding out more about the problems in marketing local products (See guidelines in Annex 1 and Annex 2). Furthermore, the codings are always influenced by the subjectivity of the coder and "the perfect coding" in the sense of a purely objective coding does not exist. Hence, as already mentioned in chapter 4.3, the number of codings can only be an indicator for the relevance of a topic and should not be confused with the subjective feeling of importance of a category or topic (Kuckartz 2010, p. 117).

Inter-subject comprehensibility

The main way to achieve inter-subject comprehensibility[96] is by **documenting the whole research process**. Therefore, in this study the author documented all relevant steps and issues of the research. Among them was the author's prior understanding, which was described in chapter 4.1. This level of prior understanding contributed to the decision to implement an exploratory pre-study. The data collection methods and tools were explained in detail and justified in chapter 4.1 and 4.2. This also included a description of the development of the tools, e.g. the interview guidelines. Furthermore, the research context was explained thoroughly in the introductory chapter, in chapter 2 on Georgia and the study region, as well as in chapter 3.3. The rules for transcription were made clear to the reader in chapter 4.3. They were also clearly explained to the person implementing the transcription. The process of gathering the data in the course of the pre-study, within the framework of the focus group discussions, and in the expert interviews was documented in chapter 4.2. The methods for analyzing the text data were explained and documented in detail in chapter 4.3.

Before interpreting the results of the discussion, the results of each study phase were described separately (in chapters 4.4.1, 4.4.2, 4.4.3), and additionally in a condensed way (chapter 4.5). Graphs showing the number of codings are provided (Figure 12, Figure 13, Annex 3). For a sound documentation of the results, the presentation of results was combined with citations from the text/interview data; results are thus "grounded in the text". In addition, the context of the interview situations was described (e.g. in chapter 4.2) as well as the background of the interviewees. The detailed presentation of the results contributed to inter-subject comprehensibility as regards the subsequent discussion of the results.

[96] It has to be taken into account that it is not possible to reach inter-subject *verifiability* (as it is not possible to replicate a qualitative study one-to-one) but instead inter-subject comprehensibility.

In the case of the exploratory study, the interview data was accompanied by photographs taken by the author (Annex 4). While the exploratory interviews were implemented without recording them, the focus group discussions were filmed and audio recorded, and the expert interviews were recorded in order to have undistorted data for the further analysis. However, for a more comprehensive picture and better comprehensibility, also recording the interviews of the exploratory study would have been supportive. Nevertheless, there is a trade-off between the creation of trust and detailed documentation through recording. In this case, since the interviewees did not know the researcher beforehand, the creation of trust was given more weight, and the interviews were not recorded.

General limitations

As this is a qualitative study, the results of this study are not representative. In particular, the different points of view of the interviewed people contribute to this fact. While the focus group participants live in the region and have their specific local interests, the experts have an outside view and their responses might have been influenced by the strategies and missions of their companies or organizations. The representative of PIN for example, who is involved in a development project in the Kazbegi region, often provided critical information. This might be due to the fact that the assessment of problems and hurdles often forms the basis for development projects. In contrast to that, the representative of the Georgian Farmers' Association was quite optimistic about the developments of agriculture in Georgia. This might be due to her focus on promoting Georgian agriculture and improving the public image of farmers.

In the case of the focus group discussions, it must be taken into account that a self-selection (at least of a part) of the participants of the focus group discussions took place. Some participants who were to take part in the groups according to the plans of the author did not have time. Instead, those who had time and were interested in the topic joined the discussion. This self-selection might have attracted people who are in general more active and interested in innovative opportunities than others. Thus, their statements and behavior are not necessarily representative of other inhabitants of the region.

Keeping these factors in mind, conclusions drawn from the results of this study can rarely be generalized. The recommendations of this study might also be applied to other settings only under very similar framework conditions, e.g. in another region with a similar initial situation and similar conditions for adjustment. However, as generalization is more the aim of quantitative approaches and not of qualitative approaches, this should not be considered as a shortcoming of the study.

This research study has provided valuable results for developing perspective options for linking agriculture and tourism in the Kazbegi region. Nevertheless, in order to develop detailed recommendations a *quantitative* analysis would also be necessary. This should include a survey on the requirements and demand of the tourists, which would be implemented directly with the tourists. In addition, additional qualitative interviews with the tourists and not only with representatives of hotels or restaurants in the region should also be implemented. Furthermore, potential ways of linking agriculture and tourism in the region should be assessed quantitatively, for example through cost benefit analyses. This would be conducive for more detailed recommendations. However, the implementation of such a mixed methods approach was not possible due to time and financial constraints.

The data of this study was gathered in the years 2014, 2015 and at the beginning of 2016. Thus, since the implementation quite some time has elapsed. Since major changes are in progress in the Kazbegi region, this large time frame must be taken into account with regard to the results and conclusions of this study.

Qualitative research in foreign languages

Implementing the study in foreign languages had a strong influence on the whole study. Some of the exploratory interviews and all three focus group discussions were conducted in Georgian language with the help of the translations of the Georgian project partner. The interviewees and people met in the region during the course of the study were generally very open and friendly. Nevertheless, one hurdle with regard to getting closer to the interviewees and potentially also receiving more information from them might have been the fact that the author does not speak Georgian. Although the Georgian project partner tried to translate everything and was thus of great help, the contact with people would most likely have been different if the researcher herself had been in the position to speak directly with them and let them know about her research interest in her own words. This also applies to the focus group discussions.

Most of the experts spoke English, and the interviews could consequently be implemented by the author herself. However, since English was neither the mother tongue of the interviewer nor the interviewees, this might have led to a loss in meaning. On the other hand, as pointed out by Kruse (2015, p. 216 f.), conducting interviews in such a “third language” might also be conducive with regard to the results of the communication, as the interviewees sometimes get much faster to the heart of a topic than when using their mother tongue. Although this was observed by the author as a positive aspect in some interviews, in others the issues were simplified to such an extent that presenting differentiated results was difficult.

5.2 Starting Points for Linking Agriculture and Tourism

Firstly, the results of the qualitative study on the status and requirements which form the basis for linking agriculture and tourism in the Kazbegi region are discussed. To this end, the requirements of the tourism sector are related to the bottlenecks and the opportunities of the agri-food chain of the Kazbegi region. In addition, selected products will be discussed with regard to their potential for being marketed to the tourism sector. In a second step, based on these results, the perspectives of how to potentially link agriculture and tourism in the future in the Kazbegi region are presented in two scenarios. In this framework, in a digression, the vision of the Kazbegi region as a biosphere reserve with a focus on linkages of agriculture and tourism is also outlined.

Requirements of the tourism sector versus challenges of agri-food producers

The interviewees of this study have mentioned the following requirements with regard to sourcing agri-food products locally: adherence to food safety standards, the need for documentation (e.g. invoices), high and consistent quality as well as sufficient and consistent quantity, organic production, attractive appearance and packaging as well as the price and the official registration of producers.

Relating these requirements of the tourism sector[97] to the current situation of agriculture in the Kazbegi region shows that there are various hurdles for linking agriculture and tourism in the Kazbegi region which have also been found in other literature on linking agriculture and tourism (e.g. Bélisle 1983; Torres 2003; Torres and Momsen 2004; Lacher and Nepal 2010; Anderson 2018; Taylor and Kneafsey 2016). Table 9 depicts the requirements of the tourism sector in the Kazbegi region in relation to the relevant characteristics of local agri-food production and the stages of the agri-food chain which are mainly affected by the requirements.

Table 9: Requirements of the tourism sector related to the agri-food chain

Requirements of the tourism sector	Relevant[98] characteristics of agri-food production	Stage of the agri-food chain[99]
Food safety	Lack of adequate processing facilities, e.g. a slaughterhouse or dairy	Processing
Documentation	Not always implemented, e.g. due to tax reasons	Trade, final sale
Quality	High quality of products	Production
Quantity	Lack of sufficient output (in several products)	Production
Consistency	Seasonal variations, supply gaps, lack of warehouses	Production, processing, trade, final sale
Organic products	No certification, but some products are already organic	Production
Attractive appearance/packaging	No professional packaging/labeling	Processing, final sale
Price	High investment needed for some types of production (e.g. trout)	Trade, final sale
Registration of the producers	Many unregistered producers, also in the tourism sector	Trade, final sale

Source: Own compilation based on the results of this study.

[97] Though speaking of "the" tourism sector here, it must be taken into account that not all requirements apply to all interviewees or all types of tourism service providers (for details see also chapter 4.4.3)
[98] Here, "relevant" means relevant with regard to the requirements of the tourism sector.
[99] This covers the stage of the value chain that is mainly affected by the mentioned requirement of the tourism sector.

In addition to the summary of these apparently mostly mismatching issues (except the high quality of products), the following discussion might provide a more comprehensive picture. While the table above is structured along the lines of the requirements of the tourism sector (see chapter 4.5), the following sections will be structured along the relevant stages of the agri-food chain.

Production – Output, land, workforce, entrepreneurship, finance

Since this is the basis for potential linkages, a key factor with regard to marketing local agri-food products to the tourism sector is the output of local agri-food products. As the results have shown, for several products only low yields can be achieved, and these are sometimes not even sufficient to cover the demand of the local population. Since the tourism sector requires a certain, reliable, and often constant **amount of products**, this is a main hurdle that would have to be overcome for linking the sectors. The low level of output is caused by various factors. Among them are a lack of access to input factors, obsolete equipment, land scarcity and insecurity about future land ownership, harsh climatic conditions, a lack of storage facilities as well as a lack of professional processing equipment. Furthermore, a lack of access to finance and a lack of knowledge of modern production techniques and marketing of agri-food products contributes to bottlenecks at all stages of the chain. These findings are in line with research on hurdles on the side of the agri-food producers with regard to linking agriculture and tourism in other regions, e.g. the Caribbean, as reflected by the list composed based on the findings of Bélisle (1983), Torres (2003), Torres and Momsen (2004) and Lacher and Nepal (2010) in chapter 3.2.2. Furthermore, this study confirms the secondary literature on the Kazbegi region that also depicted various bottlenecks in the local agri-food chain (e.g. GeoWel Research 2015a, 2016).

In particular, the **scarcity of arable land** and the insecurities about land ownership might impose a hurdle for agricultural production, and thus also for linking agriculture and tourism. The importance of access to land and clear ownership structures is based on the argument of Bertrand who states that in agricultural activities land is a "must-have" for agricultural production, since without it, an agricultural producer is not able to "pursue his occupation" (Bertrand 1958, p. 20). Furthermore, there is a strong relationship of land ownership rights and the socio-economic situation of people (Bertrand 1958, p. 171). Due to this connection, in particular strategies aiming at improving the land structure in the Kazbegi region are essential. The State Programme on Land Registration as well as an accompanying law which entered into force in 2016 aims to facilitate the process of land registration and efficient land management, and might thus contribute to the development of more efficient agriculture in the Kazbegi region (Ministry of Agriculture of Georgia 2017, p. 20, p. 48). This should also be conducive for perspective linkages.

The availability of other resources such as workforce, and natural or financial resources also, affects the potentially available output that could be sold to the tourism sector. As outlined in chapter 3.2.2, the growing tourism sector might also have an effect on the workforce and other resources available for agricultural production. However, the results of this study do not provide a clear picture with regard to this "competition" (Bélisle 1983) in the Kazbegi region.

As pointed out by Torres and Momsen (2004, p. 299 ff.), tourism might draw labor from the agricultural sector. The results have shown that in the Kazbegi region the tourism growth also leads to reverse migration, with people coming back to the region during summer time. Though this reverse migration brings more **workforce** into the region, this workforce is not available for the agricultural sector but is active in tourism. Nevertheless, as pointed out by a participant of FGD2: "*Not everybody can be involved in tourism"* (5_FGD2). This statement could reflect that the opportunity to become involved in tourism might also depend on the educational background and skills, which would be in line with the finding of Heiny (2018, p. 163) that "the probability that people with higher education who return from cities will start small businesses is comparatively higher than that of other villagers". However, more research on this would be needed. Furthermore, the involvement in tourism might depend on the place of residence. As the study has shown, in particular in smaller villages, due to a lack of infrastructure, becoming active in tourism might hardly be viable. Heiny (2018, p. 159) also stated that the smaller villages of the Kazbegi region offer less potential for tourism activities, which might be conducive to agriculture in these areas – however, this applies only as long as people do not migrate from these areas.

The representative of PIN supports the argument of the migration of workforce from agriculture to tourism. According to this interviewee, people who start working in tourism *"[....] are out of agriculture immediately"* (E4). This might for example occur due to the availability of land which is then used for tourism purposes and not for agriculture anymore *("Household garden is so small, you need a place for tourists to relax"* (E4)). This competition for land corroborates the effect of tourism on land described by Bélisle (1983, p. 501)[100].

However, a decrease in the available workforce in the Kazbegi region might also be due to reasons independent from the development in the tourism sector. As the study has shown, the region is characterized by a strong-periphery structure, with smaller, more remote villages being worse off with regard to infrastructure and service provision than the bigger villages like Stepantsminda and Gergeti (with the remote village Juta as an exception). As pointed out by the representative of GFA (see chapter 4.4.3, category "Other"), this situation might contribute to migration from the region. This also confirms the reasoning of Cox (1979, p. 40), who relates the level of education and interest in cultural activities to migration intentions in the Soviet union. Cox argues that younger people with a higher educational level tend to leave rural areas due to the lower level of cultural offers. Thus, leaving the Kazbegi region is not necessarily a flight from agriculture but a flight from leading a life without cultural activities. Consequently, in order to contribute to the development of the more remote villages, and thus to also counteract out-migration of potential agricultural workforce, investments in infrastructure and leisure activities would be needed, as also pointed out by the representative of GFA (*"But I mean, mountainous region you have to create something, […] you have to do something that the*

[100] Bélisle (1983, p. 501) provided examples where prices for land went up due to tourism real estate development, which in turn led to a decrease in agriculturally used land in these areas. In the case of the Kazbegi region, at this stage this means only that household gardens or areas for animals close to the house are used as recreational areas for tourists, but not that land prices rise due to competition on land on a larger scale, e.g. with tourism complexes; nonetheless, depending on future development such a competition should not be excluded from the considerations.

people will have the same comfort and the services what they have in the big cities. Otherwise you will not have one there and old people will pass away and you will not be able to find others" (E1)). Theoretically, the high number of unemployed people (not including those who are "unemployed" due to self-employment in agriculture or who are not able to work) could potentially work in the agricultural sector. However, the study revealed that some of those who are unemployed are drinkers and are not even interested in pursuing a job.

Becoming active in agricultural production with or without a commercial orientation also depends on the **entrepreneurial spirit** of an individual. According to Ageev et al. (1995, p. 365), entrepreneurship can be defined as a phenomenon that "[…] reflects the basic conditions that foster the economic development as a result of human creativity, new ideas, and innovations". While the representative of PIN was of the option that there would be a lack of entrepreneurship in the Kazbegi region, the representative of the GFA was convinced that the local population would have a strong entrepreneurial spirit *("[…] in Kazbegi, I still believe that the people and farmers are entrepreneurs because […] from nothing they are creating something"* (E1)). In the current research, the participants of the focus group discussions in particular have shown an interest in innovations in agricultural production and presented several ideas with regard to commercialization, which, according to the definition above, might well be an indicator for a certain entrepreneurial spirit in the region.

One might expect that the historical background, the time of collectivist orientation and a low level of economic freedom (Ageev et al. 1995, p. 365) might also have a negative effect on entrepreneurial activities today. However, neither this study nor results from other studies provide a clear picture in this respect. Natsvlishvili (2015) found that among today's Georgian inhabitants there seems to be an entrepreneurial spirit that awoke due to successful reforms, but also due to a high level of unemployment (Natsvlishvili 2015, p. 539). However, Natsvlishvili interviewed participants in the capital Tbilisi and not in rural areas, which might have influenced the results. According to a study by Schmidt et al. (2013) on Russia, a lower intention for entrepreneurial activities was observed for people from the more traditional Caucasian areas than for people from central Russia.

Another hurdle that was emphasized during all study phases and is also reflected in the secondary literature and studies on the region, is the **lack of access to finance** of the local population. Hence, access to adequate (micro-)credit products, with repayment structures adjusted to agricultural cycles, would be needed. This applies not only to machinery for agricultural production, but also to equipment for processing as well as infrastructure to store products. Nonetheless, first of all, before undertaking concrete investments, cost-benefit analyses should be carried out.

Besides workforce and finance, local **natural resources** are also important with regard to agricultural production and output. As the desk research has shown, in former times the pastures suffered from overgrazing. However, this aspect has not been mentioned by any of the interviewees, which is probably due to the strong decline in animal numbers in the region. Nevertheless, the study has shown that also today the local resources are affected negatively through agri-food production. This applies in particular to the collection of wild plants such as wild herbs or sea buckthorn. Although these resources seem to be abundantly available in the Kazbegi region, regulations for collecting such wild plants should be enforced (as stressed by the representative of PIN) with regard to the sustainability of the product. As indicated by the destruction of these plants, there seems to be a lack of knowledge of the sustainable use of natural resources. Since collecting is probably not highly paid work (though no information on this was provided in the course of the study), it is most likely implemented by people with a low level of education. Independent of the level of education, the implementation of destructive types of collection shows the need to improve the awareness of the local population on natural resources, sustainability and the effect of damages on the long-term development of the environment.

Besides agriculture, tourism might also have a negative effect on environmental resources (Brohman 1996, p. 53 ff.). However, currently an alternative form of tourism (compare Brohman 1996, p. 65; chapter 2.5, 3.2.2), for which nature is an essential basis, is prevalent in the Kazbegi region. The strong interest of tourists in the environment and nature of the Kazbegi region is also described by Mamniashvili (2018, p. 189). Thus, currently there does not seem to be a threat to natural resources through tourism in the Kazbegi region. However, if activities such as quad biking (which is offered by Rooms Hotel for example) increase, in the future the environment might be harmed and thus also one of the basic resources for agriculture. In addition, if the number of tourists in the future exceeds the carrying capacity of the region, such negative effects might be possible. Going to a meso-level (see e.g. Rauch 2009, p. 188), the policies with regard to tourism development should thus try to continue to support alternative types of tourism and try to foster sustainable approaches, which are in line with the carrying capacities of the region and the Kazbegi National Park (Khomeriki 2015, p. 183).

In order to improve efficiency in agriculture, during all stages of the study the interviewees expressed the need for new **technological equipment** or machinery. However, not only in the Kazbegi region but everywhere in the world, the use of more modern equipment or machinery must be evaluated with regard to its effect on labor and employment, as remarked by Abbott (1997, p. 4). One the one hand, the study has shown that there is a lack of workforce for the agricultural sector, which would generally be in favor of implementing more modern machinery. On the other hand, the study also showed that there is a high level of unemployment. However, since it might get difficult to get people who are unemployed due to drinking problems or laziness to work, and since the equipment used is very outdated,[101] it would likely be recommendable to improve machinery. Furthermore, in case of self-employment, machinery would not create competition for manpower but would simply be a support.

Besides the above-mentioned factors, which are mostly hurdles with regard to linking agriculture and tourism, one aspect has been clearly considered positive during all phases of the study and by different types of interviewees (including producers, traders and tourism sector representatives): The **quality of local agri-food products.** Without a high quality of local products, it would be questionable whether it would make sense at all to try to improve efficiency in the sector or to think about inter-sectoral linkages. However, the confirmed high quality of local agri-food products might provide a good basis for such endeavors.

[101] The author herself could observe the plowing of fields with donkey carts during the pre-study.

The high quality of products might also be relevant with regard to substituting imports, which is also one of the measures of the Strategy for Agricultural Development in Georgia (Ministry of Agriculture of Georgia 2015). Vegetables are among the products which are imported but which could also potentially be produced in the Kazbegi region at a larger scale (FGD2, FGD3). In addition, as mentioned by several interviewees the quality of imported products is lower than that of local products (e.g. according to the representative of Zeta Camp: *"I always prefer to buy something Georgian and not Turkish, I am (laughs) not against it, but I really don't like Turkish tomatoes, it is big difference"* (GH1)). Furthermore, the study confirmed the secondary literature showing that tourists also prefer local products (see also below). Thus, the combination of the higher quality of local products and the preferences of tourists for local products, seem to provide an optimal reason to try to support local linkages of agriculture and tourism.

Going one step further, the quality of local products might even be a comparative advantage of the Kazbegi region compared to other Georgian regions (as reflected by the statement of the representative of Rooms Hotel: *"If you take the local fish, it is just incomparable to what you can buy in Tbilisi, it is so much better, so much fresher and so much different"* (H1)). Thus, not only with regard to import substitution, but even with regard to potential export[102] of products from the region, the high quality could be relevant. Another factor which could be in favor of exporting agri-food products from the region is the comparatively later harvesting season due to the colder climate.[103]

In addition to the requirement for high quality, according to representatives of the tourism sector some products would only be bought if they were organic. Thus, although no official certification of organic production takes place in the Kazbegi region yet, the production of **organic agri-food products** is crucial with regard to the establishment of linkages. This wish for organic products has been expressed from the side of Rooms Hotel for honey and herbal tea for example. However, this research has not revealed whether for the tourism sector the organic production should be certified or whether it would be sufficient to simply produce organically without certification, which – according to participants of the focus group discussions – already takes place. However, this result must also be treated with caution, since the terms "organic", "bio" and "local" were intermixed throughout the interviews. Nonetheless, taking into account the costs of certification and the aim to sustainably use natural resources, organic production without certification would still be better than conventional production. In addition, regardless of whether there is certification, organic products would also better for the health of the consumers.

However, if the agri-food producers are able to finance the costs of the certification (and produce a volume that is sufficient that an investment in certification make sense from an economic point of view), they might also achieve higher selling prices. Although the buyers would have to pay these higher prices, they also would have more secure organic products and the label of the certification could also be used to attract consumers, since it would probably

[102] Under the assumption that enough output to be marketed can be produced.

[103] However, although potentially being an additional way to generate income, as the focus of the study is on intraregional marketing of products, the export of products is not considered further.

create more trust than the pure statement of the producers or those who offer the product to the final consumers. Without such official labels, more trust is needed (from the side of the buyer and the consumer), and as the study has shown, trust might be a difficult topic among people who are not part of the wider family or the circle of acquaintances (see below in chapter 5.3.1).

The mixing of terms might also an indicator that there is not much knowledge of official organic production among the local population. Thus, before recommending certification measures, awareness of the idea behind organic production and the relation to sustainable development of the region should be raised (with a view to the local population this was confirmed by the representative of Elkana: *"They need some, not some, many trainings to know and to understand that if the food is local and ecologically pure, and it tastes well and it tastes safe and it is the additional income to your tourism business, it is very good and it will increase your income"* (E3)). The study has also shown that consumers show a strong interest in *regional* products. This might lead to the conclusion that in a first step, the implementation of official organic production might not be that relevant, but the focus could also be put more on the promotion of *regional* products. However, since it is a requirement of the representatives of the tourism sector who make the decisions what to buy, and thus also create the demand and pay for the product, it might still be better to directly focus on official organic production.

Processing – Food safety, attractive packaging

With regard to processing, this research has shown that there are no professional processing facilities in the Kazbegi region. Hence, processing either takes place outside of the region (e.g. in case of the sale of live cattle), or only at the households of the producers (e.g. in the case of dairy products). However, the tourism sector requires changes in the type of processing currently implemented. Firstly – and this is the most important requirement of most of the tourism sector representatives – **food safety standards** must be adhered to. This is particularly relevant with regard to the production and processing of animal products. Secondly, though not being a necessary condition for buying from local agri-food producers, in the course of the study the wish for a higher variety of dairy products was also expressed by the representatives of the tourism sector (e.g. from Zeta Camp). This lack of a higher variety of products is partly also caused by a lack of available processing equipment (*"For example, in order to produce sour cream you need mini plants and processing material – which we do not have"* (6_FGD3)).

As mentioned various times during the focus group discussions, new standards and requirements, (e.g. from the side of the EU with regard to food safety or documentation) might impose a hurdle for the small-scale agri-food producers to sell their products. The participants who talked about this topic also seemed to be angry about it (e.g. 5_FGD2). This shows that the food producers should not only be forced to implement the new standards but that also awareness raising on these issues is necessary. Without explaining to the producers the relevance of the standards as well as the advantages and beneficial effects (e.g. that safe products are also beneficial to their health), they will probably not back the new standards and will be reluctant to implement them. However, it must be noted that others have already been convinced to try to apply European regulations. In particular, the implementation of standards which are part of the Association Agreement with the EU, and the Deep and Comprehensive

Free Trade Agreement (DCFTA) provide good opportunities for the region not only with regard to selling products to the local tourism sector but also with regard to exporting (Ministry of Agriculture of Georgia 2017, p. 22). However, in any case this process of implementing new standards must be accompanied by consultancy in order to be efficient and in line with the requirements.

Besides the investment in a slaughterhouse or a milk collection center, **small-scale equipment** could also be helpful in order to create some more value generation in the region, e.g. equipment for canning products or for processing raw milk in order to have a greater variety of products. More professional processing in the region would also contribute to higher value generation, which could be conducive with regard to income generation for the agri-food producers.

Although **attractive appearance and packaging** are among the requirements of the tourism sector, the results must be considered from different points of view. For example, the representative of Goodwill mentioned the requirement for adequately bottled and labeled honey (*"Honey should be bottled and labeled, of course [...]"* (S1)). However, the question remains open of *how* to bottle and label it. As pointed out by one of the experts of FAO, some tourists would prefer honey in simple glass jars without labels as this would give them a *"sense of organic, family made product rather than something commercial"* (FAO1). This observation is in line with Dodman and Rhiney (2008, p. 1) and Sims (2009, p. 321), who state that consuming local food is one way to satisfy the desire of tourists to have an *authentic* holiday experience. However, as pointed out by Dodman and Rhiney (2008, p. 6) "in relation to the tourist experience, the actual 'undisputed origin' of an object is of less interest than the ways in which certain objects and practices are deemed to be 'authentic'". This seems to apply perfectly to the statement of the representative of FAO that it gives them *"a sense"* of an organic or hand-made product, and that is also what they are looking for, independent of the real origin. The different requirements of Goodwill and interviewees from the region might also be an indicator that a tourist who travels to a rural region might have different preferences than someone who buys products in a supermarket in a big city. However, more research on these differences would be needed.

Trade and final sale – Warehouses, seasonality, knowledge and management skills, information on the counterpart

According to the representatives of the tourism sector, **consistency in supply** is essential for them. However, as the study has shown, in various cases products must be sold directly after harvest due to a **lack of warehouses** or other storage facilities. This also affects the supply of products to the tourism sector. Warehousing might be a way to avoid selling all products directly and thereby contribute to smoothing the supply over the course of the year. Furthermore, it might not only be an option that helps to overcome the oversupply directly after harvest, but also to increase the bargaining power of small-scale producers with traders and other buyers. The establishment of warehouses or other storage facilities has been strongly recommended in the course of this research, but without any specifications. However, Abbott (1997, p. 4) also emphasizes that the size and type of a warehouse must be adjusted to local conditions. Thus, in the Kazbegi region it is also recommendable to take into account the availability of local workforce and the accessibility of the warehouse location.

The establishment of warehouses might not only provide an opportunity to charge higher prices from traders who come to the region, but could also lead to higher prices for buyers from the tourism sector within the region. Nevertheless, this would probably not be a hurdle for potential linkages, since the consistency of products has been mentioned much more often as a requirement with regard to sourcing of local agri-food products than the price. Actually, the **price** has been mentioned only by the representative of the supermarket in Tbilisi. Nonetheless, although the tourism sector has not mentioned the price as a requirement, it must be ensured that also in the future prices do not become too high for two reasons. On the one hand, because excessive prices will likely lead to the tourism sector buying more imported products. On the other hand, although for the agri-food producers it would be beneficial to earn high prices, besides the tourism sector's capacity to pay for local products, the local population must also be taken into account. As the study has shown, people in the region have a comparatively low income, in particular in the more remote villages (see Heiny 2018, p. 65), which makes it difficult for them to pay high prices for the food they need. According to Abbott (1997, p. 10 f.), this trade-off between providing incentives for increased production through paying higher prices to the agri-food producers, and to still enable the poor local population to buy the products is a common problem in developing countries.[104] As a solution in some countries (e.g. in Sri Lanka) two-price systems have been introduced; however, such systems are difficult to implement and impose high cost burdens on government institutions (Abbott 1997, p. 11).

Although the amount of output still is the most important factor with regard to the total availability of an agri-food product, as pointed out above, the establishment of warehouses might be a way to deal with the natural **seasonality** of agricultural production. Besides this, it must also be taken into account that the tourism sector itself in the Kazbegi region is characterized by a strong seasonality, since most tourists only visit the region during summer time, and thus the majority of the demand is during the summer months. Although this is currently the situation, the representative of PIN is convinced that in the near future, winter tourism could also be implemented in the Kazbegi region, which would also be conducive for marketing local agri-food products and increasing the income of the local small-scale producers throughout the year. This finding on the potential for winter tourism in the Kazbegi region also confirms the impression of Thielen (2018, p. 44), who conducted research on the tourism development in the region. The possibilities of an increase in winter tourism in the Kazbegi region are also in line with the plans of Rooms Hotel to offer more winter activities. Additionally, the road to Russia might contribute to bringing tourists to the region during winter time (FAO 1). If the market during winter time will not increase due to more tourism in the Kazbegi region, there would still be the opportunity to market products in the nearby village of

[104] As mentioned in chapter 2.5 according to the Development Assistance Committee (DAC) of the OECD, Georgia is part of the "Lower Middle Income Countries and Territories" (DAC List of ODA Recipients Effective for reporting on 2018, 2019 and 2020 flows; source: OECD 2019). Thus, although it is not part of the Least Developed Countries, Georgia receives Official Development Assistance (ODA) and in particular in some rural areas of Georgia, the income level and living standards are below those of developed countries.

Gudauri, which is a tourism hub; furthermore, the demand from this village might increase further due to a big new Radisson Hotel there. In addition, the representative of PIN was convinced that *"[…] this region has unique opportunities to be really operational 12 months, in both sectors actually, agriculture and tourism and actually if these two sectors work both together, the profit from both sectors could be distributed equally and in reality all 4000 residents could really live normally […]"* (E4). One factor which might contribute to this is the newly installed cable car between Kobi and Gudauri which might attract tourists to the Kazbegi region during winter time (even though in the region itself not many winter tourism attractions exist), because this facility allows them to go skiing in Gudauri without a long drive (Gudauri Travel 2018). Assuming that during winter time a potential market for local agri-food products would also be there, not only warehouses would be important but also knowledge on and equipment for the conservation and preservation of food products. In addition, as pointed out by the representative of Caucascert, certain greens could also be grown during winter time.

Besides the directly mentioned requirements, the study has also revealed that there is sometimes a **lack of knowledge and information on the needs and possibilities of the respective counterpart** (i.e. the agri-food producers and the potential buyers from the tourism sector) as for example the case of strawberries reflects (chapter 4.4.3 main category "Agri-food products", subcategory "Fruits and berries"): Although the Rooms Hotel would be interested in offering local strawberries to its guests, the representative admitted that he was not aware that in the region strawberries are also produced for commercial purposes. Such a lack of connection between agri-food producers and potential buyers has also been found by Anderson (2018, p. 180) in Tanzania. It consequently shows that more exchange between producers and the tourism sector is necessary in order to foster the dialogue between the counterparts, as also recommended by Anderson (2018, p. 180).

Various representatives of the tourism sector mentioned the need for thorough **documentation** of selling and buying procedures, including for example the issuing of invoices. In addition, the requirement for **registration** of the producers was brought up. In contrast to that, the study has shown that there is a general tendency for informal economic activities in the region. This is also reflected by the secondary literature on the region (GeoWel Research 2015b, p. 21) which shows that only a fraction of the local guesthouses are officially registered. As outlined by Shah (2000, p. 27), such informal structures are typical for under-developed countries.

One reason for the lack of documentation and registration might be the avoidance of tax payments. However, the Georgian government has implemented various support measures for mountainous regions. Among them is the Law on the Development of Mountainous Regions, which was implemented in 2015 (Ministry of Agriculture of Georgia 2017, p. 12). According to this law, tax privileges are granted to people living in high mountainous settlements (International Labour Organization 1996-2014, p. 3). For example, businesses in these areas are exempt from several taxes as defined by the Tax Code of Georgia.[105]

[105] According to the Tax Code of Georgia, the following tax exemptions apply to people in mountainous settlements: 1) "taxable income received during a calendar year by an individual with many children residing in a highly mountainous region (who has three or more dependent children under age 18) from the activity in the above-

The unwillingness to register or document business procedures might thus be an indicator that people do not have access to information about what is offered by the government to support them. Consequently, this information should be provided to the inhabitants of the region; in particular, because it might have an effect on the linkages of the sectors.

Although not contributing to tax revenues, which might also be a negative factor with regard to rural development, for the individual agri-food producers informal activities might also provide a first opportunity to enter the market. Most probably for the unregistered guesthouses in the region, buying from a local agri-food producer who is not officially registered would not be a hurdle. However, in the case a producer who also plans to sell products to officially registered tourism enterprises, a registration would be imperative. The study has shown that there is a general **lack of knowledge of marketing** of products, which can also be observed in various other regions (e.g. in the Caribbean, according to Bélisle 1983). Thus, support in professional marketing via workshops or other consultancy measures would be needed.

The agri-food value chain and opportunities with regard to linking agriculture and tourism

The data from the qualitative study confirms the presence of many of the bottlenecks that have already been found in secondary literature (e.g. GeoWel Research 2015a), but also points towards some opportunities. Besides the high quality of the products and the late season, which could provide an opportunity with regard to selling agri-food products (see chapter 4.4.3; 4.5), the agri-food chain depicted in chapter 4.2.1 also shows that the producers themselves often cover several stages of the food chain. According to the European Network for Rural Development (2012, p. 5), this is a typical characteristic of a **short food supply chain (SFSC)**. Through this low number of intermediaries (if there are intermediaries at all) who are normally also located in the region (e.g. guesthouses who buy the products to provide them to tourists), the value generation stays in the region, which might be conducive for development (Marsden et al. 2000, p. 436; Knaus et al. 2017, p. 121). Another characteristic of SFSC is that the products are embedded in information on the origin of the product and thus also on the region (Renting et al. 2003, p. 400), which might contribute to promoting the region. However, as pointed out above, although the value generation does not normally take place outside of the region, it must be taken into account that the value generation in the region still is low since the processing equipment is outdated and processing is mainly done at home. More professional equipment

mentioned region, and the income tax payable for up to 3,000 Lari of taxable income received during a calendar year by an individual with one or two children (who has one or two depended children under age 18) residing in a high mountainous region from activity in the above- mentioned region shall be reduced by 50 percent" (: http://rs.ge/common/get_doc.aspx?doc_id=9033, p. 68; checked on March 17, 2019); 2) "those living in the districts located in the northern and southern slopes of the northern ridge of the Caucasus and the inhabitants of Adjara and Guria mountainous villages, communities, and boroughs determined under the Law of Georgia on the Social economic and Cultural development of High mountainous Regions, on the land plots on the mentioned areas. Property tax for the residents of South Georgia high mountainous regions shall be reduced by 50 percent for the land plot on the given areas" (Source: http://rs.ge/common/get_doc.aspx?doc_id=9033, p. 198; checked on March 17, 2019).

might overcome this hurdle and contribute to a higher value generation in the region, not only in relative but also in absolute terms.

The network mapping (see chapter 4.2.1) that had been conducted with one market-oriented farmer in the course of the exploratory study has shown some relationships with regard to producing and selling agricultural products. It revealed that in various cases, not only one type of relationship exists (e.g. either a business relationship or a family relationship), but that various types of relationship overlap (e.g. there is a family relationship with a cousin, but also a business relationship with this person). This is an example of a **multiplex network** as described by Stahr (2001, p. 29), which can often be found in rural structures. It might also be considered an example of the embeddedness of economic behavior in social or kinship structures (Granovetter 1985). Nevertheless, as Gudeman (1978, p. 34) points out: “Not all bonds of kinship however, are economically important. Family ties inter-link domestic groups within the village and beyond, but such external ties are not fundamental of a value-producing or consuming nature”. This potential lack of economic value is also reflected by a high share of products which are provided to relatives for free. Opportunities with regard to linking agriculture and tourism might shift the focus from free provision to family members to the more income-generating activity of selling the products to the tourism sector. In addition, social capital, e.g. in the form of embeddedness in social structures, might also be conducive for entrepreneurial activities (Liñán and Santos 2007).

Local agri-food products and their potential for the tourism sector

Interest of tourists in local agri-food products

As pointed out in chapter 2.5, the tourism currently implemented in the Kazbegi region can at least partly be considered alternative, since it is characterized mainly by small family-owned guesthouses and young guests seeking authentic experiences. According to Torres and Momsen (2004 p. 312), such tourism structures are suitable for producing and marketing specialized local products and could contribute to linkages of the sectors (Lacher and Nepal 2010, p. 83).

In line with that, the study has shown that tourists who travel to the region like eating local food (reflected by the following statement for example: *“[...] the tourist they really prefer local food”* (E4), which was also confirmed by a participant of FGD2 and the representatives of Zeta Camp and Elkana: *“[...] it will be very interesting for all the tourists to taste the local food there, especially these very specific products they are producing there, quite specific for Georgia”* (E5)). This preference for local food might be due to the fact that many young people who seem to be interested in new cultural experiences are travelling to the region. These kind of “alternative tourists” are often more open to new products. Thus, these results do not provide any indication of “food neophobia”[106] among the tourists who travel to the Kazbegi region, which was mentioned by Mak et al. (2012 p. 17) and Chang et al. (2011, p. 308) as one factor

[106] Food neophobia means the fear to eat new or unfamiliar food (Mak et al. 2012 p. 17; Chang et al. 2011, p. 308).

which could have a negative effect on potential linkages. These results confirm the secondary literature on the Kazbegi region which found that tourists wish to have more local dishes to eat onsite (Gugushvili et al. 2017, p. 51), and that they travel to the region due to the local cuisine (GeoWel Research 2015b, p. 19). Thus, this study also gives an indication that the tourists who visit the region enjoy the same experience with regard to food as the international guests who visit the rest of Georgia: tasting Georgian cuisine and wine (Georgian National Tourism Administration 2018b, p. 13 ff.).

In line with a potential demand for local food products and dishes, Rooms Hotel plans to increase the offer of dishes which use agri-food products (*"[…] we want to have a menu which will be only from the food that you can find in 50 km radius, or 70, maybe we will take 100 […]"* (H1)). This confirms Lundgren (1975, p. 15) in that the more established a hotel becomes, the more local products are used.

In addition, the study did not reveal any preferences for food from the home countries of the tourists. The absence of such preferences as well as of food neophobia might also be due to the fact that a large number of Georgians travel to the region. Furthermore, none of the interviewees reported a fear of illness due to unfamiliar food, which has also been reported as a demand-related hurdle for linking agriculture and tourism in the lists of Bélisle (1983), Torres (2003), Torres and Momsen (2004) and Lacher and Nepal (2010). Thus, while some of the findings from other studies are corroborated by the results from the Kazbegi region, in particular the findings related to the preferences of the tourists do not confirm the challenges found in other countries. The preferences found for the Kazbegi region might also be due to the fact that the Kazbegi region is characterized by an alternative type of tourism and corresponding tourists, and not by mass tourism, which mostly applies to the regions of the other studies.

International tourists who travel to regions of mass tourism might have more preferences for food from their home countries (Torres and Momsen 2004, p. 300), which would lead to more imported food, thus leading to more leakages and less income for the local population. Furthermore, this would also have negative effects on the environment. Consequently, with regard to sustainable development of the Kazbegi region it would be important that the development of the tourism sector is kept within an acceptable framework and to not be allowed to develop in the direction of mass tourism. On the contrary, it would be good to provide incentives with regard to the further development of alternative forms of tourism in the region.

Although the current preferences of tourists in the Kazbegi region seem to provide a basis for successfully linking agriculture and tourism in the region, the results might show a certain bias since only the representatives of the hotels have been interviewed about the preferences of the tourists and not the tourists themselves.

Suitability of selected local agri-food products for being marketed to the tourism sector

Although the preferences of tourists in the region might provide a basis for linking agriculture and tourism in the Kazbegi region, the results have shown that various bottlenecks in the agri-food chain lead to a lack of sufficient output to be marketed. In the course of this study the products which were mentioned mostly in relation to tourism were potatoes, dairy products, meat, honey, herbs, and trout. In the following, these products will be discussed with regard to the availability of output and the potential to market them.

According to interviewees of all study phases, the regional conditions allow the cultivation of high-quality **potatoes**, but the low yield and accompanying supply gaps are the main hurdles with regard to marketing potatoes to the local tourism sector. Nevertheless, representatives of the local tourism sector are interested in sourcing potatoes locally (e.g. Rooms Hotel and Zeta Camp). Furthermore, potatoes are frequently used in local dishes, e.g. in Khachapuri with local cheese and local potatoes. Shavgulidze et al. (2017) conducted a study on the potential of increasing the efficiency of potato and dairy production in the Kazbegi region, and found that potato efficiency could be improved through the use of seed potatoes of higher quality and through protecting the potato plants against diseases. According to Shavgulidze et al. (2017, p. 5), by using more modern technologies, such as pesticides and high quality seed potatoes while using the same level of inputs, the output could be increased by 75%. Thus, although there is a general restriction through the available arable land in the region, at least at these arable areas potato output could potentially be increased significantly. However, with regard to organic production, care must be taken regarding the use of chemical fertilizers or pesticides. In cases where non-chemical measures could be used, perhaps only a lower increase in output might potentially be possible in the short term. However, with regard to the long-term sustainable use of natural resources in the region, it might still be more efficient than employing chemical means. Another important factor with regard to increasing the potential to market local potatoes is the establishment of warehouses (as requested by several interviewees, e.g. 2_FGD1). Without improving the general efficiency of growing potatoes, there would not be more potatoes available in total. Nevertheless, warehouses might lead to smoothing of the supply and thus lead to a more stable and higher income for the potato growers due to avoiding selling all of the potatoes from the region at the same time.

This study does not provide clear results with regard to the amount of **meat** or cattle for meat production available in the region. Most of the time the focus was not on the available *amount* of meat, but on concerns regarding food safety due to the lack of a slaughterhouse in the Kazbegi region. However, the statement of the representative of PIN that there might not be enough cattle for an investment in a slaughterhouse to pay off, could be an indicator that the amount of meat available in the region is very low (*"[…] you cannot invest 100,000 in Kazbegi when you might have one or two cows to slaughter in a week"* (E4)). Other data of the Georgian project partner on livestock productivity in the region[107] has shown that there could also be an opportunity to increase efficiency and output of livestock in the Kazbegi region by improving herding and grass management. This increase would mainly be based on a high number of additional calves which would stay on the pastures for only one summer for fattening purposes and then be slaughtered. This fattening of cattle would therefore not require them to be fed

[107] The data is used for a joint publication within the framework of the AMIES II project, namely the paper "Modelling Environmental and Socio-Economic Resources at the Landscape Level – Potentials for Sustainable Land Use in the Georgian Greater Caucasus" by Tim Theissen, Joachim Aurbacher, David Bedoshvili, Peter Felix-Henningsen, Thomas Hanauer, Sarah Hüller, Besik Kalandadze, Ingrid-Ute Leonhäuser, Anja Magiera, Annette Otte, Rati Shavgulidze, Giorgi Tedoradze, Rainer Waldhardt, which has been produced under the lead of Tim Theissen (Theissen et al. 2019).

during winter. The additional meat output would be sufficient for the local population *and* for tourists in the region, and even allow for additional exports from the region. Hence, with a higher number in animals to be slaughtered, the investment in a slaughterhouse in the region might also pay off and contribute to more value generation in the region.

With regard to the aim to link agri-food producers to the local market and the tourism sector, the export of live animals must be viewed critically, since it does not contribute to a better food supply in the region. In general, within Georgia the high number of animals exported to other countries has led to a deficit of meat, which also creates high meat prices (Caucasus Business Week 2017). Although not contributing to the supply in the Kazbegi region, due to the rising prices, transporting live animals from the Kazbegi region to other Georgian regions might also provide an opportunity for additional income. With a slaughterhouse and a refrigerated truck in place, bringing meat instead of animals from the Kazbegi region to other Georgian areas would contribute to additional value and income generation for the local population. It would also be a much better option from the point of animal welfare. Nonetheless, as long as there is no slaughterhouse there, even though it is not recommendable from the point of animal welfare, exporting live animals from the region might still be an option that could contribute to rural development of the region if the income is reinvested in regional business activities or spent in another way inside the region and not outside (which would be a type of leakage).

On the other hand, it is also questionable whether meat consumption will remain as popular in the future. According to the Society for Nutrition Education and Behavior, there is a general trend to vegetarianism and veganism (Schuster 2018). Although this does probably not apply to the same extent in countries in different stages of development, it might still be important for the Kazbegi region to improve the offer of vegetarian food, since a large number of tourists are from western countries, where such trends can be observed. The study results have also shown that more vegetarian dishes would be desirable *("[...] a lot of tourists underline that they are tired of eating meat"* (E4)), which also confirms the secondary literature on the region (GeoWel Research 2015b, p. 22). Furthermore, the reduction of meat production and consumption could be beneficial from an environmental perspective (e.g. reduction of CO2 emissions, use of pastures), which has effects on the global as well as on the local level.

Nevertheless, keeping this in mind, the study has shown that currently demand for meat would also be there (as indicated for example by the representative of the Rooms Hotel). Thus, if the producers managed to increase their output (what could be possible under certain conditions as found by the Georgian project partner, presented in Theissen et al. 2019), and the investment in a slaughterhouse would be economically viable, the producers could sell their meat directly to tourism service providers and other buyers in the region. Assuming that the installation of an official slaughterhouse would go hand in hand with proper veterinary controls and food safety standards, this could lead to an offer of fresher and healthier meat to *all* consumers in the region, be it tourists or the local inhabitants.

While there would generally be an interest from the tourism sector to buy more **dairy products**, this is impeded by two factors: A low milk output, and the lack of a milk collection center or dairy (*"[...] they don't have enough milk to have the factory"* (E1)), which operates according to food safety requirements. However, as the results show, cheese is already bought by local tourism enterprises and is also used as a medium for exchange in the region, which also confirms other studies on the region. According to Shavgulidze et al. (2017, p. 3): “Cheese represents the main marketable commodity due to relative storability and high price”.

Further data of the Georgian project partner shows that milk output in the Kazbegi region could be increased by 23% with the same level of inputs but improved feeding practices (Shavgulidze et al. 2017, p. 4 f.). This would result in such a high output that besides supplying the local population there would also be enough to be marketed to tourists. In addition, there would even remain a surplus to be sold outside the region (Theissen et al. 2019). With an increase in output, the investment in a milk collection center or dairy possibly could also pay off. This would have several advantages: The milk would be collected centrally, it would be controlled with regard to food safety, and the representatives of the tourism sector would only have to deal with one supplier and not various small-scale dairy producers (referring to the statement: *“[…] so it is a bit complicated and difficult for them to deal with 100 farmers which 50 of them will bring you the product on the same day”* (FAO1)). In addition, through such a cooperative the producers might get easier access to consultancy or other types of support. With regard to prices, Anderson (2018, p. 176) provides an example where milk collection centers sell the collected milk to the tourism sector. Although in these cases the prices paid to the producers are lower, through the management structure of the cooperative the producers receive a monthly payment, which they rate higher than insecure payments, even if these might be higher (e.g. outside of the harvest season). This might also be an interesting construct for the agri-food producers in the Kazbegi region, since most of them are self-employed in agriculture and thus also do not receive regular salaries with which they can plan. As outlined above, the focus group discussions have also shown that not only large-scale dairy processing facilities would be supportive, but also small-scale processing equipment in order to be able to produce a greater variety of dairy products (e.g. sour cream; 6_FGD3) as demanded for example by the tourists and the representative of Zeta Camp. This would also be conducive to the fostering of value generation in the region without risking high investments.

In addition, the participants of the focus group discussions seemed to be open for change when they referred to the idea of a cheese festival or adapting products to the needs of tourists in order to enable them to take products home, e.g. the production of small wheels of cheese. Thus, this engagement and motivation of the local population in combination with the possibility to increase output would provide a sound basis for establishing linkages of dairy producers and the tourism sector in the Kazbegi region.

Honey is one of the products associated with high quality (according to interviewees during all study phases), which is also in demand by the local tourism sector. However, local honey of a high quality is often sold in advance, and supply gaps might occur. Among the main hurdles for the producers are a lack of finance to invest in modern equipment (3_FGD1; 4_FGD3), as well as a lack of knowledge of modern production and marketing (FGD3, E4). In addition, the fact that some representatives of the tourism sector only want to buy organic honey imposes additional hurdles on selling honey to the tourism sector.

However, in 2015 the Ministry of Agriculture of Georgia implemented a beekeeping program. This program supports the establishment of beekeeping cooperatives and provides several other support measures to beekeepers in Georgia, e.g. access to modern beehives and capacity building. In addition, the quality of the produced honey can be checked free of charge at a laboratory of the Ministry of Agriculture of Georgia (Ministry of Agriculture of Georgia 2016). Thus, participation in such a program could also be beneficial for beekeepers in the Kazbegi region, as it might enable them not only to produce more due to having access to more modern equipment and consultancy, but also to produce in line with quality and food safety standards. Hence, the provision of information and the promotion of such programs in the region would be important.

Ideas to market honey emerged bottom-up from the local inhabitants as well as from the representatives of the tourism sector. For example, honey has been mentioned various times as a product which, in addition to be offered to the tourists onsite, could also be appropriate to be taken home as a food souvenir. With regard to selling the honey to tourists, adequate packaging must also be taken care of, although what adequate means depends on the preferences of the buyer (see the above discussion on the "authentic" appearance or packaging of a product). A publication by the FAO only contains the basic recommendation that "containers for marketing honey must be lightweight and of low cost, and preferably see-through so that customers can see the product" (Bradbear 2009, p. 131), which could also be applied in the Kazbegi region.

Since the demand from the tourism sector is already there, based on more detailed analyses of the demand and the necessary improvements in production, a further investment in this sector might make sense. According to Bradbear (2009, p. 134) "Better quality honey, presented in attractive containers for sale will stimulate local trade and this in turn leads to an increase of beekeeping activities", which Bradbear emphasizes with several successful examples from developing countries. An increase in beekeeping in the region would also be favorable for increasing yields in agriculture and sustaining the environment and the biodiversity through the pollination of plants by the bees (Bradbear 2009, p. 3). Hence, beekeeping would be beneficial for the region for direct (income through selling bee products) and indirect reasons (sustaining environmental resources and increase in agricultural yields).

Although there seems to be a lack of sufficient output of various products, the results have not shown this problem with regard to **strawberries or lettuce**. However, one reason for this might be a current low demand for these products. This low demand might be due to a lack of awareness that these products are produced in the region (as applies to the case of the Rooms Hotel, which would be interested in local strawberries but did not know that they are produced locally[108]) or if people do not know what to prepare with products (as applies to lettuce, which is not typical for the Georgian cuisine and thus not yet accepted among some parts of the local population). However, with an increasing awareness and knowledge of strawberries and lettuce, the situation might also change to a higher demand.

Although lettuce and strawberries are not typical products in the region, they seem to be suitable to satisfy the demand of tourists. Assuming that the products are promoted accordingly, this is in favor of potentially producing the products at a larger scale. This might be an example of the phenomenon described by Hermans (1981, p. 473), that traditional agricultural production

[108] For this lack of information on the counterpart, see also the discussion above under bottlenecks

might decrease (such as sheep meat production in the Kazbegi region) while other products that are in demand by tourists increase.

With regard to lettuce, the results show that Rooms Hotel buys most if not even all of the locally produced lettuce. Although this is an opportunity for the local producers to sell their output to a large buyer who requires a lot (instead of selling to various small buyers which increases variable costs), this focus on only one buyer might also entail some risks. In an example provided by Torres and Momsen (2011, p. 145) from an island in the Caribbean, a large hotel was the only buyer from a local vegetable cooperative; however, after several years the hotel had to close due to an external shock in the form of a recession and the farmers involved lost their only source of income. Thus, selling at least to two buyers would be recommended in order to reduce risks. Admittedly, this applies not only to lettuce but to all products that are sold. Another recommendation which came up in relation to lettuce but applies to more products is the use of a refrigerated vehicle for transporting perishable products. However, first in would have to be analyzed if the purchase of such a vehicle makes sense in relation to the demand and supply situation.

In addition to these products, due to the demand from the side of the tourists (according to E4, GH1), **vegetables** could potentially be sold to the tourism sector if there is enough output. An increase in output could potentially be achieved by introducing new types of greenhouses with innovative technologies, e.g. solar energy (as recommended by 1_FGD3). However, as in the case of a slaughterhouse or a milk collection center, additional studies on the effectiveness of an investment in such a solar heated greenhouse would have to be carried out.

The study does not provide clear results regarding the availability of **wild plants** in the region. Although various interviewees stated that sea buckthorn for example is abundantly available and many herbs grow in the region, this is no indicator of the amount that could be collected without damaging the environment in the longer run. Nonetheless, the study results show an interest in these products from tourists (according to Rooms Hotel and Zeta Camp). Furthermore, wild plants can be processed easily (e.g. drying of herbs on the sun or cooking jam out of sea buckthorn) and are furthermore much less risky with regard to food safety than meat or dairy products. However, relying on wild sources might be unpredictable, and yields might fluctuate between oversupply and supply gaps (Heywood 1999, chapter 4). Additional cultivation of plants might lead to a more controlled available output. Such a cultivation of herbs or berries such as sea buckthorn might also be important with regard to environmental protection. Collecting wild plants for commercial purposes often goes hand in hand with the depletion and genetic erosion of a species (Heywood 1999, chapter 5). As the results have shown, in the Kazbegi region, the collection of herbs and sea buckthorn is also often not in line with regulations to protect the environment. Thus, such a depletion of wild plants might also occur there.

Furthermore, as described by Heywood (1999, chapter 5), there is also a correlation between land ownership structures and the use of wild plants. On the one hand, common areas are important for poor people who do not own land, to collect plants and use them for income generation. On the other hand, people do not have many incentives to sustainably use the land if it is not owned by themselves, or if it is unclear who the owner is. Land ownership in the Kazbegi region is often unclear and land reforms are not yet finalized (see chapter 2.2). Thus, only using wild collections to satisfy tourism demand – which will probably grow more due to the continuing growth in tourism numbers – would not be recommended. Instead, it seems that initially the cultivation of herbs and sea buckthorn for commercial purposes, to be sold to the tourism sector, would be more suitable with regard to sustainable resource use. In the longer run, after implementing more environmental-friendly collection practices (as recommended by E4) and having raised awareness of the importance of sustainability, a combination of wild collection and cultivated plants could also be suitable.

The results show that for several products (e.g. honey and herbs) there is a demand for **organic production**. Wild collections could more easily receive organic certification (according to E7, the representative of the company Caucascert) which would be conducive for marketing them to the tourism sector in the Kazbegi region. However, as outlined above, in general the collection of wild plants must be implemented with care in order to not deplete the species of interest. A certificate which would only be handed out to the collector when the plant is collected without harming the environment might be conducive for fostering sustainable collection practices.

As outlined in chapter 4.4.3. and chapter 4.5, organic meat production could also be implemented relatively easily. In contrast to that, it would be difficult to produce milk organically due to the need for organic fodder during winter time. With honey, the results differ. While the participants of the focus group discussion were convinced that they produce organic honey, this might still not be sufficient with regard to certification. Since bees fly in an area of almost 13 km^2 (or in a radius of approximately 2 km from the hive) the whole area would have to be organic for organic certification (Bradbear 2009, p. 139). This also applies to certification in Georgia, where bees in a radius of 3 km from the hive must "have access to adequate and sufficient nutrition" (Caucascert 2019, p. 66). Since there is also arable land where chemical fertilizers are used, this requirement could be a serious hurdle with regard to implementing organic honey production in the Kazbegi region. In all cases, the costs of certification have to be related to the available output.

5.3 Perspectives of Linking Agriculture and Tourism in the Kazbegi Region

As described in chapter 3.1, one of the framework conditions for agricultural production is the current growth in the tourism sector in the Kazbegi region. Since the current situation of small-scale agri-food producers is not satisfactory, the main aim of this study was to look at ways in which they could adjust their income generating behavior to the changing framework conditions. One assumption in this respect was that the growth in tourism might provide a basis for this adjustment, since it might offer a market for selling regional agri-food products and might thereby stimulate agricultural production and contribute to an increase in income of the small-scale agri-food producers. In order to find out more about the potential of linking agriculture and tourism in the Kazbegi region via marketing of regional agri-food products, a closer look was taken at potential hurdles and requirements.

The results have shown that there are many bottlenecks in the agri-food chain in the Kazbegi region. Most of these bottlenecks directly or indirectly affect the agricultural output, which according to various interviewees is not stable or consistent in quantity and quality in the case of most of the products. Although there also seem to be some opportunities to increase the output of certain products, this is not yet the case. In contrast to that, the tourism sector requires a specific amount of products and a reliable supply, in addition to various requirements with regard to food safety and the quality of products. Thus, although tourism might lead to an increase in demand for local agricultural products, the results show that – besides various other hurdles – currently there is not enough agricultural output available which could be sold to the tourism sector[109], subtracting also the output used for own consumption.

Contrary to these findings, one implicit assumption underlying the research questions was that there was enough agricultural output to be marketed to the tourism sector in the region. However, in order to be able to link the sectors successfully, an increase in the efficiency and output of agriculture in the Kazbegi region would be imperative. Thus, to be able to respond positively to the needs of the tourism sector, the small-scale agri-food producers would need (government) support to overcome the bottlenecks and hurdles in agriculture that are mentioned above (Mitchell and Ashley 2010, p. 78).

Based on the hurdles and requirements discussed above, the following list summarizes the **recommended measures** that should be implemented in order to provide a basis to link agriculture and tourism:

- Improvement of land structures and the land ownership situation
- Access to input factors, establishment of an input supply store
- Access to adequate financial products, e.g. agricultural credits, which can be paid back in relation to the agricultural season and harvesting time
- Implementation of cost-benefit analyses with regard to investments, e.g. in processing facilities such as a slaughterhouse or a dairy, solar heated greenhouses, or warehouses
- Support for access to finance for production, processing or storage facilities, where applicable
- Support in the establishment of warehouses and storage facilities; establishment of warehouses which fit to the available workforce and are easy to reach for agricultural producers; support in the establishment of a slaughterhouse and dairy, and other production or processing facilities, where applicable
- Support in access to machinery and technologies, via credit or leasing options or cooperation in sharing machinery: access to larger-scale machinery such as a plough for potato growing; access to smaller-scale equipment, e.g. modern hives for beekeeping; access to processing equipment for conservation or canning products or to produce different types of dairy products; access to equipment which allows the collection of wild plants such as sea buckthorn, other berries or herbs in an ecologically-friendly manner

[109] There are also exemptions from this, e.g. in the case of lettuce; however, results of all study phases clearly indicate a general lack of agricultural output in the region.

- Consultancy with regard to the production and marketing of agri-food products
- Awareness raising and consultancy on the importance and potential benefits of implementing standards of agricultural production and processing, e.g. food safety standards
- Awareness raising and consultancy on the ecology and its resources (e.g. with regard to the collection of wild plants), and its importance for long-term sustainable development of the region
- Provision of information on government support structures or NGO projects which support the development of the region (e.g. the Law on the Development of Mountainous Regions)
- Provision of information on organic production and support in the implementation of organic agriculture; awareness raising on advantages of certified organic production, and the related costs

Most of these recommendations for the Kazbegi region are not totally new and corroborate recommendations that have previously been made by NGOs or government institutions (e.g. GeoWel Research 2015a; Local Action Group Kazbegi 2016). However, the list above not only summarizes support measures which might contribute to an increase in efficiency of agriculture, but also includes measures which are in particular relevant in view of the possibilities of linking agriculture and tourism in the region.

Admittedly, before the implementation of these measures additional studies on the efficiency of certain technologies in combination with certain types of agricultural production would be needed (e.g. does the investment in a milk collection pay off with regard to the potential production onsite?). In addition, more detailed studies on the demand of the tourism sector would have to be conducted directly with the tourists, and also through a survey.

The study has revealed that government strategies and support programs in favor of tourism and agriculture already exist in the Kazbegi region. Among these is the Kazbegi Development Strategy, which aims at increasing productivity in agriculture, improving tourism services and supporting cooperation between the sectors (Local Action Group Kazbegi 2016, p. 23 ff.). In addition, support is provided to the inhabitants of the region through ENPARD. Country-wide strategies such as the Rural Development Strategy of Georgia, the Strategy for Agricultural Development in Georgia as well as the Law on the Development of Mountainous Regions might also be conducive for enabling small-scale agri-food producers to overcome the above-mentioned hurdles.

However, although these measures are in place, it does not necessarily mean that this contributes to an increase in output or that it influences the decision of a household to remain or become active in agriculture. As Heiny (2018, p. 145) found with regard to an individual’s decision to enhance activities in the tourism sector, it is mostly the close family that has a strong influence on the intention and not the government. This means that if the close social surrounding is in favor of enhancing activities in tourism, there will be a higher intention to become active in this field (Heiny 2018, p. 154). However, the government still influences the macro-framework in which an individual acts (Heiny 2018, p. 145). Furthermore, the intention to enhance activities in the tourism sector is positively influenced by the possibility of getting access to bank loans (Heiny 2018, p. 154). Though this is not necessarily transferable to activities in the agricultural sector, it shows that the intention to start business activities cannot simply be reduced to incentives and support measures provided by the government.

Thus, since support projects do not necessarily lead to overcoming the hurdles and to successfully increasing output (and to the accompanying incentive to work in agriculture), the future perspectives of the Kazbegi region must be discussed within the framework of two options: One, in which an increase in agricultural output is possible and where the abovementioned hurdles are overcome, and the other, where an increase in agricultural output is not possible since the hurdles are not overcome.

It is assumed that remaining active in agriculture would be a way for small-scale agri-food producers to adjust to the changed framework conditions only if an increase in agricultural output is possible. In this case, the incentive to stay in agriculture would be to sell the products to the tourism sector and thereby to generate additional income. Without possibilities to increase agricultural output, selling regional agri-food products to the growing tourism sector would not be possible and, based on the assumption above, there would not be an incentive to continue working in this sector.[110] Instead, people will probably decide to become active in tourism, as staying active in agriculture no longer provides an economically suitable alternative – and would thus also not be an efficient way to adapt to the changed framework conditions in the sense of the theory of cultural lag of William F. Ogburn as outlined in chapter 3.3. Figure 17 below depicts the options of small-scale agri-food producers to adjust to the changed framework conditions depending on the possibility of increasing agricultural output.[111]

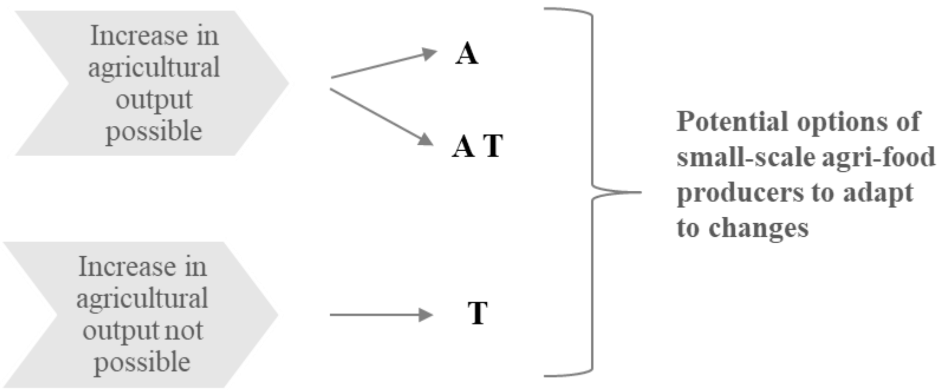


Figure 17: Potential options of small-scale agri-food producers to adapt to changes

Source: Own illustration. A: Commercial agriculture; AT: Combination of agriculture and tourism; T: Tourism.

[110] There might be more reasons and influential factors for making the decision to work in agriculture or tourism, or also to pursue other activities. For example, it might also be the case that people decide to leave the region or work only in the tourism sector even if government programs and incentives to work in agriculture exist. Furthermore, they might be willing to participate in the programs and work in agriculture and still not be successful in increasing their outcome. However, for the sake of simplicity, such other options will not be considered here.

[111] This is a basic depiction that only includes decisions on agriculture and tourism and combinations of it; for simplicity reasons all other options are excluded.

If an increase in production is possible, the small-scale agri-food producer could decide to be active solely in agriculture (A) with the aim of selling agri-food products or combining agriculture and tourism (AT), e.g. in the form of offering farm stays for tourists and supplying them with the own products. Such a combination of activities in agriculture and tourism is supported by the finding that for example the participants of FGD2 were involved in the tourism sector (e.g. as guesthouse owners), but at the same time active in agriculture. If an increase in output is not possible, it is assumed that the small-scale agri-food producer would leave the agricultural sector and become active in tourism.

In the following the term "household"[112] is introduced for two reasons: On the one hand, because the combination of agriculture and tourism is usually not carried out by only one person and a household can be composed of more than one person. On the other hand, and this is the most important reason, the household is used as another, lower level than the region, which helps to discuss the scenarios outlined in the following by means of these two different levels. Nevertheless, as a household can also be composed of only one person, applying the term small-scale agri-food producer (as done so far in the course of this study) instead of small-scale agri-food producing household is also still possible.

The following table 18 provides an overview of the effects that decisions on the household level would have on the region and its opportunities for linking agriculture and tourism. Similar to the hopper used in the scenario technique for strategic planning (see e.g. Littmann and Udo 1998; Reibnitz 1987), these two options in the long-term lead to two scenarios: The best case scenario "Perfect Link", and the worst case scenario "Pure Tourism".

Nevertheless, in line with the statement that "[…] scenario planning can be modified in a multitude of ways to fit a particular context" (Peterson et al. 2003, p. 364), no specific type of scenario technique is followed. The decision to discuss the future perspectives of the Kazbegi region using scenarios was based on the idea that "[…] scenarios should usefully expand and challenge current thinking about the system" (Peterson et al. 2003, p. 361). In order to achieve this, they are based on certain assumptions and show the extreme cases of potential developments.

[112] With a household being composed of one or more individuals: „The concept of a household is based on the arrangements made by people, individually or in groups, for providing themselves with food or other essentials for living“ (OECD 2001a).

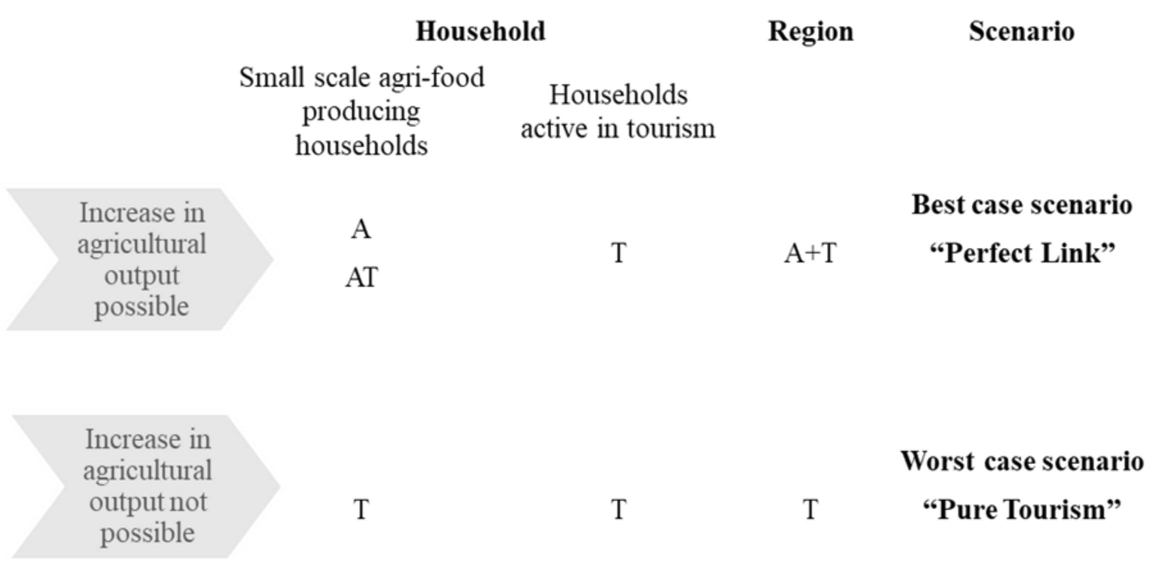


Figure 18: Scenarios

Source: Own illustration. A: Commercial agriculture; AT: Combination of commercial agriculture and tourism at household level, i.e. intra-household linkages; T: Tourism; A+T: Combination of agriculture and tourism at a regional level, i.e. inter-household linkages.

The left side of the graph shows the perspective of the involvement of small-scale agri-food producers/small-scale agri-food producing households in agricultural or tourism, as depicted in the previous graph. In an additional column, the households that are currently active in tourism and contribute to the growth of this sector are added. The number of households that are currently involved in tourism is assumed to be fixed, since the results do not provide any evidence for leaving the tourism sector in cases where households are already involved in this field. As the study has shown, there is a clear trend towards tourism in the Kazbegi region and households which become active in the tourism sector no longer seem to be interested in agriculture. Thus, although an increase in agricultural output might theoretically also provide an incentive to switch to agriculture, for households that are currently active in tourism this option will not be considered further. Based on this assumption and the options that small-scale agri-food producers have in order to adjust to changes, depending on whether or not an increase in output is possible, the effects on the regional level are depicted in the graph. The combination of agri-food producers/households active in small-scale agricultural production who remain active in agriculture (either only in agriculture or through combining agriculture and tourism at the household level) and the households that are active in tourism would allow the linking of agriculture and tourism on a regional level, which in the figure above is depicted with A+T on the regional level. This scenario shows the best case for the region (as discussed below) and is named "Perfect Link".[113] Within the scope of this scenario the vision of optimal linkages of agriculture and tourism in the Kazbegi region in the framework of a biosphere reserve is also outlined in a short digression. The second case, where an increase in agricultural output is not

[113] Based on a recommendation of Peterson et al. (2003, p. 362), the scenarios have been given characteristic names: "To help communicate and discuss scenarios, it is useful to give each scenario a name that evokes its main features".

possible, depicts the combination of agri-food producers who become active in tourism due to a lack of incentives to stay in agriculture, and households which are already active in tourism. In the longer term, such decisions at the household level would lead to the Kazbegi region being a pure tourism region. Hence, the second scenario is named “Pure Tourism”, which can also be considered the worst case scenario (see chapter 5.3.2).

5.3.1 Scenario 1 – “Perfect Link”

In the framework of the scenario “Perfect Link” possible future linkages of agriculture and tourism are depicted and discussed. The scenario encompasses households which are only active in agriculture, households which combine agriculture and tourism at the household level, and others who are only active in tourism.[114] Through this diversification of activities, opportunities for linking agriculture and tourism exist both at the household and at the regional level.

Besides the starting situation of the possibility to increase output, this best case scenario is based on other assumptions. First of all, it is based on the assumption that tourism in the region will not harm the environment. This is supported by the result that due to its natural endowments, the Kazbegi region offers good conditions for the development of alternative tourism such as eco-tourism (Khardzeishvili 2009, p. 521; Toloraia 2012b, p. 6), while it would be difficult to implement other types of tourism without high investments (e.g. luxury tourism). However, besides bottlenecks in the agri-food chain, the study has also revealed several shortcomings in the tourism sector which must first be overcome.[115]

A main challenge is the poor infrastructure in the region, including not only bad road conditions but also communication infrastructure, in particular in the more remote villages (according to the results of the pre-study and the expert interviews, as well as secondary literature on the region). In addition, a large number of guesthouses in the region are not registered and do not pay taxes. It is also likely that other tourist services such as horse riding or guided hiking tours are also not officially registered. Thus, the region has a high level of informal economic activities. Although Shah (2000, p. 27) found this to be typical for developing countries, it leads to tax losses and unfair competition. Additional challenges are related to a low service level and a lack of English language skills. Furthermore, information for tourists on the region is hardly available (FGD2).

Thus, as in the case of the hurdles in the agri-food sector, these challenges would first have to be tackled for this best case scenario.[116] First of all, government investments in infrastructure would be necessary. In addition, awareness should be raised of the possible advantages of the

[114] Both scenarios will only be described qualitatively and not quantitatively, as the basis for such a quantitative scenerio development is not given through this research, i.e. no figures or percentages are provided for the share of households active in agriculture or tourism.
[115] Since this was not the focus of this study, such shortcomings were not presented within the framework of chapter 5.2 where the bottlenecks in the agricultural sector were dicussed.
[116] Although this includes some recommendations, they are much less detailed than in the case of the agricultural sector, since the focus of this study has not been on the development of the tourism sector.

registration of businesses (e.g. cooperation with other official enterprises or easier access to credit). Furthermore, information on potential support measures, such as the Law on the Development of Mountainous Regions should be provided (see also chapter 5.2). In addition, the region should be better promoted and English language classes should also be offered to those who are interested. For further professionalizing of the sector, consultancy on international tourism standards should also be offered. In addition, the population should have access to suitable (micro-)credit products in order to improve infrastructure at their guesthouses, (e.g. building an additional bathroom, which is often missing), or investing in larger-scale tourism services. Furthermore, consultancy on the implementation of eco-friendly sustainable tourism should be provided.

In this respect, going back to the assumption of an environmental-friendly tourism it is also assumed that the implementation of eco-tourism goes hand in hand with tourism numbers which will only grow until the carrying capacity of the region and the Kazbegi National Park is reached and not beyond (Khomeriki 2015, p. 183). This is supported by the finding that the tourists who currently visit the Kazbegi region are mostly interested in experiencing nature and thus likely have an interest in conserving it.

At the same time, under this scenario it is assumed that the tourists who travel to the region will not only be interested in local food, but will also create a demand, i.e. they will spend money onsite in the Kazbegi region. So far, analysis of secondary data has revealed that around 25% of the spending of tourists in Georgia is used for food (Georgian National Tourism Administration 2018a, p. 6; Georgian National Tourism Administration 2018b, p. 1). This is less than in other countries, where it constitutes around one third of the total tourist expenditure (Bélisle 1983, p. 498; Henderson 2009, p. 321; Meler and Cerovic 2003, p. 177). However, one reason for this might be that tourists simply do not have the opportunity to spend more on food onsite in rural areas since sometimes not much is offered. With regard to the Kazbegi region, an indicator for that could be the statement of various experts that tourists even bring their own food to the region. It is assumed that with an increase in food provision for tourists – which is supposed to be possible with the higher output of the underlying scenario – the spending will also increase.

Furthermore, it is also assumed that agriculture will be implemented in a sustainable way that does not harm the environment, even if productivity is increased. This assumption is supported by the statements of several interviewees who have indicated that fertilizer use in the Kazbegi region is generally very low. In addition, overgrazing no longer seems to be a problem, and it is assumed that agricultural practices which harm the environment such as the current method of wild collection, will be changed to environmental-friendly practices, e.g. through consultancy and awareness raising.[117]

In summary, under the scenario “Perfect Link”, the Kazbegi region will be characterized by both sustainable agriculture and tourism. The hurdles in agriculture and tourism will have been overcome, for example with the help of government or non-government support measures (see

[117] This assumption is based on the fact that much information on this topic was provided by the representative of PIN who is currently leading a LAG in Kazbegi and is working on such issues.

list in the beginning of chapter 5.3). Furthermore, the demand from the side of the tourism sector allows for linkages of agriculture and tourism. Detailed linkages are discussed in the following.

Ways of linking agriculture and tourism via marketing of agri-food products

Since linkages of agriculture and tourism are only possible when there is enough agricultural output available, the possible future ways of linking agriculture and tourism are discussed in the framework of the scenario "Perfect Link". Among the ideas about linking agriculture and tourism in the Kazbegi region which resulted from the study are the establishment of a cooperative shop and market stands, the selling of food souvenirs, the implementation of contract farming, the creation of a food map as well as the implementation of food tours. In addition, farm stays or the idea of a regional brand could be considered ways of linking agriculture and tourism.

Some of these ideas could be subsumed under the term **"agriculture-based tourist attraction"**.[118] This includes in particular farm stays or the implementation of food tours. In these cases, agriculture and tourism are combined at the household level. A characteristic of these agriculture-based tourist attractions is that the agri-food producer and the consumer are in direct contact. According to Renting et al. (2003, p. 400) and Marsden et al. (2000, p. 425), these are typical examples of **short food supply chains (SFSC)**. The advantage is that in the case of attracting consumers or tourists directly to the farm or household of an agri-food producer, the product is automatically embedded in information about the origin of the product. Conscious consumers (it is assumed that eco-tourists are) should value this positively. It should also contribute to the better promotion of a product – at least when the location of production is not a deterrent.

Farms stays have not been mentioned directly by the participants of the study. However, the pre-study revealed that this type of tourism does exist in the Kazbegi region, but it is not comparable to farm tourism in Tirol or Bavaria for example. Farm stays can be implemented through an intra-household combination of agriculture and tourism. However, in case of the Kazbegi region, the term "farm stay" might be misleading, since in this region the concept does not cover owners of large farms but mainly small-scale agri-food producers who also have a guesthouse and provide tourists with their own food, to the extent possible. However, in these cases the above-mentioned advantage of directly receiving information on the product also is included. This also applies to **food tours**, where tourists go hiking and can pause at the (guest)houses of agri-food producers or buy products at the farm gate. In all cases, where the consumer stays directly at the house of the producer, joint production or processing of products, or cooking of dishes with the tourists could also be implemented. In this way, not only information on these actions or the product itself will be provided, but it is likely that in this

[118] In line with the definition of Bowen et al. (1991, p. 51), who described an agriculture-based tourist attraction as "an enterprise engaged in plant or animal production with an objective of attracting tourists to the site to enjoy its agricultural attributes and/or services to consume or purchase agricultural products there", see also chapter 3.2.2.

framework informal conversations about the culture or history of the region will also take place; again, this might be a way of promoting the region. Furthermore, the producer has no costs for transport of the products to a sales location. In addition, according to an expert from FAO (E5) no investment from the side of the producer is required, since the consumer is buying directly at the farm gate. However, there might still be some investments required in order to have a house that offers the consumer an attractive eating or shopping experience. This does not mean that everything must be modern, since tourists often like authentic looking locations, but certain standards should be in place. Torres and Momsen (2004, p. 297) also state that bringing tourists to the products is not only a way to link the sectors, but also a way to provide access to markets for poorer people to sell their products. The production locations could be promoted through the use of "**food maps**", as recommended by the expert from FAO (E5).

Besides directly visiting the places of origin of the products, in the "Perfect Link" scenario the tourists might also get in touch with local products via **cooperative shops or market stands**. Although in these cases there is less information available about the product than in case of visiting the production location, it still has a high level of embeddedness, since in many cases the producers are also the salespersons. The advantage of such sales locations is that they could be established closer to the tourists, which could also be conducive to the marketing of the products. On the other hand, as remarked by Abbott (1997, p. 11), one must consider the relative proportion of the costs of marketing (in this case the costs of transporting the product to the selling location) and the profit margin. Besides market stands, **selling at the road side** might also be a direct option for small-scale agri-food producers to sell their products. Such types of selling are also associated with a high level of informality (Shah 2000, p. 28). However, at the same time it might provide a first entry to the market for a small-scale agri-food producer, which could then step by step turn into more formal commercial activities.

An indirect method of selling where an additional intermediary comes into play is to sell products to tourists through hotels, guesthouses, or restaurants. These linkages therefore do not occur within one household, but between agri-food producing households and larger companies or households that are involved in tourism in the region. In the case of such linkages, the price the producer receives from the intermediaries might be lower than the price he could charge directly from a tourist. This is currently not the case in the Kazbegi region, since many products are only rarely available but are in demand. However, under this "Perfect Link" scenario there could also be a higher supply and thus lower selling prices due to the increase in output. Nevertheless, it is assumed that so much output would be available that the lower prices would be outweighed by the larger amount that could be sold and produced more efficiently in comparison to the status quo.

As previously mentioned, such linkages are often of an informal character. However, one way of linking agriculture and tourism more formally could be via **contract farming**; an idea that came up during the expert interviews. In particular, contracts which are adapted to the production cycle could be used to improve the situation of small-scale agri-food producers (Abbott 1997, p. 10; Wang et al. 2014). However, as in the Kazbegi region contracts are often not written, but only verbal agreements (according to the representative of the GFA), a high level of trust is needed, which could be a hurdle (see below).

Food souvenirs, which are still agri-food products but processed and packaged in a way that makes them attractive and easily transported by tourists could be offered both via intra-household linkages or by providing them indirectly through a shop or intermediary such as a hotel or guesthouse. Other studies have also provided examples of the sale of food souvenirs, for example in the case of Barbados, rum and spices were marketed successfully to tourists (Torres and Momsen 2011, p. 143), while in Thailand green tea was successfully marketed as a local souvenir (Lacher and Nepal 2010, p. 93). Tea is also a product that was mentioned various times as a suitable food souvenir for the Kazbegi region. It can be transported easily and is typical for the region, which fits to Lin and Mao (2015, p. 20) who note that food souvenirs capture the specific characteristics of a region. The production of tea does not require a lot of processing (in the most complicated case a dryer for the leaves, as pointed out by the representative of PIN), and is not difficult to implement with regard to food safety. It could also be a product easily be marketed by the producers themselves in some direct way, e.g. without special marketing infrastructure at their farm gate or guesthouse (thus implying the positive effects of a SFSC). Shah (2000, p. 29) found that a relatively large share of tourist expenditure is spent on shopping and gifts, which would also support the idea of food souvenirs.

Depending on the product, different ways of linking it to the tourism sector might be suitable. For example, contract farming might be suitable for fresh vegetables which cannot be stored, since the producers then already know that their harvest will be bought. Products such as herbs, which have a long durability and are easy to store, might be suitable to be sold as a souvenir. Assuming that food safety standards and adequate control mechanisms are in place, cheese might also have potential to be marketed as a souvenir, e.g. if produced in the form of small cheese loafs, as recommended by local inhabitants (FGD2).

According to the representative of PIN, there are options to not only market local agri-food products from the Kazbegi region but to develop a brand for the whole region, which would include both tourism and agriculture sector actors. An example where regional branding is successfully implemented is the Rhön region in Germany with its umbrella brand.

Though being less comprehensive than a regional brand covering various sectors, a brand which unifies only the agri-food producers of a region can also be conducive for linking them to the tourism sector. An example of such a model is the German brand “LANDMARKT” which is a union of various Hessian agri-food producers who produce and market their products according to certain quality criteria (LANDMARKT 2019). If the products under a brand are marketed directly within the region (for example in farmer shops or at the farm gate) the visitors who come to the region are also provided with information on the origin and quality of the product. Such a concept is also in line with the approach of SFSC (and the described embeddedness with information of a product), which might be conducive for rural development. However, such a brand could also be useful for marketing products indirectly through supermarkets or other channels, as also applies to the products of LANDMARKT. As pointed out by two participants of FGD2, agri-food producers individually approach representatives of the local tourism sector and try to market their products to them. If they and their products belonged to an officially promoted brand, the marketing of local agri-food products would likely be easier, since it creates trust and the potential buyers are already informed in an official way on the advantages of products certified within such a brand.

Cooperation and trust

In order to establish linkages of agriculture and tourism outside of a household, cooperation would be necessary, either between a producer and a buyer (e.g. in the case of contract farming) or between producers (e.g. in the case of a cooperative shop). However, as reflected by the results of this study, for all types of cooperation trust is a decisive factor. This importance of trust is also described in the literature focusing on the relationship of social capital and economic activities (e.g. Granovetter 1985; Woolcock and Narayan 2000; Reynolds 2010).

The results show different levels of trust or willingness to cooperate, depending on whether or not the cooperation partner is known, e.g. through kinship or friendship relationships. Between people who know each other, there seems to be a high level of trust (*"We trust each other, 100 percent" (1_FGD1),* as stated during FGD1). However, cooperation with people who do not belong to the circle of acquaintances does not seem to be popular (*"We have learned, that it is better not to depend on anyone and mind your own business"* (4_FGD1)). This situation does not seem to apply only to the Kazbegi region but seems to be a phenomenon of the whole Georgian population. As described by Bertelsmann Stiftung (2018, p. 15 f.): "Georgia has been characterized as a country with high 'bonding' social capital, but low 'bridging' social capital, i.e. in-group solidarity vs. out-group mistrust". Based on the results of the current study, this is exactly how the situation in the Kazbegi region with regard to cooperation could be described.

Obviously, such a lack of trust in people who are not yet known is a hurdle for cooperation. However, it has to be taken into account that cooperatives in mountain areas can already be established with three people (according to the representative of the ACDA). Since most people have close family members in the Kazbegi region, the lack of trust in cooperation with people outside of the circle of acquaintances does not generally impede cooperation in the region (the results have also shown that cooperatives are often composed of neighbors or solely of family members).

Assessment of the scenario "Perfect Link" with regard to the future of the Kazbegi region

Within the framework of the sustainable livelihoods approach, Chambers and Conway (1991, p. 11) point out that the ability to cope with shocks is based on strategies of diversification, e.g. **pluralism of income sources**. Consequently, when a household (which can also be an individual person) is active only in agriculture or tourism and thus relies only on one source of income,[119] the ability to cope with stress is lower. In contrast, being active in both tourism and agriculture, (e.g. participants of FGD2 who own a guesthouse and produce their own agricultural products, which are also offered to their guests) is a **better risk reduction** strategy.

However, the households who are active in commercial agriculture or only active in tourism could also reduce risks of dependency through a certain share or amount of subsistence farming. This could for example be implemented through small vegetable gardens close to the houses, which already exist for various households in the Kazbegi region, as the pre-study has shown. Such a mixture of commercial activities and subsistence agriculture in order to increase

[119] Assuming that in this scenario there are only these two options to generate income.

diversification and decrease risks has also been described in the framework of the "Bielefelder Verflechtungsansatz" (Elwert 1985; Evers 1988; cited by Rauch 2009, p. 317). One advantage of such an approach is that the production for own consumption could be an important safety net in case of external shocks. Such shocks might for example include the situation that the Kazbegi region is cut-off from other regions, e.g. through landslides due to erosion or heavy snowfall, or political threats. Looking back on the history of the Kazbegi region, already in the 1990s subsistence agriculture helped the population to survive.[120]

On a regional level, having both sectors represented in the region would be in line with the aim of the New Rural Development Paradigm to foster the development of rural regions through a **multi-sectoral approach** (OECD 2016, p. 32 f.). Similar to the household level, there would be less dependency on one sector, which might contribute to **risk diversification** and less uneven economic development (Torres and Momsen 2004, p. 298; Brohman 1996, p. 50). Such a multi-sectoral, risk-reducing approach might be relevant in particular with regard to the ongoing tensions with Russia, which have been described by Erkomaishvili et al. (2014, p. 171), Bertelsmann Stiftung (2018, p. 28) and Nienhuysen (2018).

Furthermore, selling locally produced agri-food products to the tourism sector could also be a way to **reduce imports** to the region. Subsequently, such a reduction of imports through fostering linkages of agriculture and tourism on a regional level might be a way to **counteract potential leakages** (Brohman 1996, p. 56; Telfer and Wall 1996, p. 638; Bélisle 1983, p. 498). Nonetheless, it must be taken into account that some products cannot be produced in the region due to the local conditions (e.g. olive oil or sugar). Therefore, these products will still have to be imported, even if linkages between local agriculture and tourism are strengthened.

With adequate policies in place to foster sustainable agriculture that does not harm the environment (see assumption above), agriculture could even contribute to the **preservation of rural landscapes**.[121] Such landscapes could in turn be an asset for tourism and thus attract more tourists who are interested in nature and culture, and who demand local agri-food products. Consequently, agricultural producers would have an incentive to be active in agriculture due to the opportunity to sell their products to tourists, but at the same time they would have an incentive to produce sustainably in order to preserve the rural landscapes. Thus, having both agriculture and tourism in the region might contribute to "aesthetically desirable" (Bowen et al. 1991, p. 45) landscapes. As mentioned above, this would in turn be an asset for tourists and might lead to more tourists who would like to consume local food, which would again provide an incentive for the local agri-food producers to produce and sell more, and so on. Thus, such linkages of agriculture and tourism on a regional level could even lead to a **virtuous cycle as regards sustainable development** of the Kazbegi region.

As shown above, the "Perfect Link" scenario offers the small-scale agri-food producers in the Kazbegi region the opportunity to adjust their income-generating behavior to the changes in the framework conditions for agricultural production in the sense of the theory of cultural lag of

[120] Thus, although the aim of the study was to find options for marketing agricultural products, a total focus on commercialization, without producing any goods for the own household would not be recommended.
[121] The author refers to the concept of multifunctionality in agriculture.

William F. Ogburn. Furthermore, leaving the individual or household level, the multi-sectoral nature of this approach would also be beneficial for the whole Kazbegi region.

In the following digression, the vision of optimal linkages of agriculture and tourism in the framework of a biosphere reserve in the Kazbegi region is outlined as an example of the best case scenario “Perfect Link”. The vision is still partly based on the results of this study, but it also abstracts from the results in order to present a situation with optimal linkages of agriculture and tourism. This abstraction is in line with the definition of the Oxford Dictionary, according to which a vision is: “A mental image of what the future will or could be like” (Oxford University Press 2019). Within the scenario “Perfect Link”, the aim of the vision is to further stimulate thoughts for developing future perspectives of the Kazbegi region.[122]As outlined in the following, the concept of a biosphere reserve seems to provide a sound basis for such a vision.

Digression: The vision of linkages of agriculture and tourism in the Kazbegi region within the framework of a biosphere reserve

Besides revealing various potential options for linking agriculture and tourism, this study has shown that tourists travel to the Kazbegi region because of the beautiful nature there, and development strategies also aim to protect this nature and contribute to sustainable tourism and agriculture development. In addition, the production and provision of organic products could be fostered. On the other hand, inhabitants also face problems such as low income and unemployment, which contribute to migration from the region. Thus, although the rich natural endowments are an asset, the region must also be interesting for the inhabitants from an economic point of view. The situation in the Kazbegi region therefore seems to call for a solution which sustainably connects socio-economic and environmental issues. One concept on which a sustainable relationship between man and nature is built is a biosphere reserve.

The concept of biosphere reserves originated in the 1970s, based on the Man and the Biosphere Programme of the United Nations Educational Scientific and Cultural Organization UNESCO (UNESCO 1996, p. 3). The core question underlying the development and the definition of a biosphere reserve is: “How can we reconcile conservation of biodiversity and biological resources with their sustainable use?” (UNESCO 1996, p. 3).

Based on this question, as outlined in the Seville Strategy of UNESCO, biosphere reserves must fulfill three core functions (UNESCO 1996, p. 4, p. 16):

1) Conservation: Preservation of resources, species, ecosystems and landscapes
2) Development: Sustainable economic and human development
3) Logistic support: Environmental education and research

[122] This vision and its characteristics might also be discussed onsite with the local population in order to evaluate what could be realistic, and thereby serve as a means to develop bottom-up solutions for the region.

A biosphere reserve should be composed of three types of areas: one protected core area with the focus on preservation of biodiversity, a buffer area where activities which are in line with the ecology such as ecotourism or research can take place, and thirdly, a transition area with settlements and agriculture and other economic activities where different stakeholders cooperate in order to sustainably use and develop resources of the area. A special characteristic of biosphere reserves is their flexibility, e.g. with regard to ownership structures or the location and definition and implementation of the three areas (UNESCO 1996, p. 4 f.).

Based on EUROPARC Deutschland e.V. (2007, p. 12) and Deutsches Mab-Nationalkomitee (2004, p. 105 ff.), Kraus (2015, p. 79) summarizes the concrete actions of sustainable management in biosphere reserves as follows:

- Land use adjusted to the nature and specificities of the region
- Socially and environmentally acceptable tourism
- Environmentally sound business management
- Use of eco-friendly technologies
- Setting up regional value chains
- Production, distribution and marketing of unique regional products or attractions

Biosphere reserves are often located in areas which – besides their endowment with natural assets – face structural problems like poor infrastructure, unemployment and migration. Due to their holistic approach, biosphere reserves are considered to be measures that contribute to the development of peripheral areas which lag behind the development of other regions (Kraus 2015, p. 73).

One example of a biosphere reserve which is considered a model region of rural development and particularly successful in the field of marketing of regional products is the Rhön Biosphere Reserve in Germany (Robinson and Keenan 2010, p. 61; Knickel 2001, p. 126). With regard to agri-food products and linkages to the market – which has been the focus of this study – the Rhön region is a role model due its successful regional labeling scheme, which supports agri-food producers of the region in marketing their products under an umbrella brand in order to increase their income and contribute to the development of the region through strengthening regional value chains (Kraus et al. 2014, p. 164). In order to convince member enterprises of the umbrella brand in the field of tourism to buy more regionally produced agri-food products, a specific incentive system has been implemented. Depending on the quantity that the enterprises source within the region, they receive different types of labels which are an indicator of the use of regional products for the guests (Kraus et al. 2014, p. 171). As tourists are more and more interested in consuming regional products, the use of such products and the accompanying seals or labels is attractive for tourists, restaurants and other tourism service providers (Knickel 2001, p. 129). Organic farming is promoted via a bio seal, which leads to additional spending of tourists (Knickel 2001, p. 128, p. 130). The products mostly have higher prices than imported products; however, tourists tend to pay more for these products due to the holiday setting and the special experience they are looking for (Knickel 2001, p. 130 f.).

Could the Kazbegi region become a biosphere reserve?

Framework: The Kazbegi region seems to combine various features which could provide a basis for the development of a biosphere reserve. First of all, a potential protected core area of a biosphere reserve in the Kazbegi region is the already existing Kazbegi National Park. According to UNESCO (1996, p. 4) areas of the biosphere reserve may overlap with already existing protected areas. Thus, as the aim of the Kazbegi National Park is also to protect the eco-system and preserve biodiversity, it could be a suitable core area for the biosphere reserve.

Nature tourism and agriculture linkages: The study revealed that one of the main reasons to travel to the Kazbegi region is its nature and the Kazbegi National Park. Furthermore, tourists are interested in local cuisine (see chapter 5.2). These results also corroborate the findings of GeoWel Research (2015b, p. 19) and Toloraia (2012b, p. 12). Since these are core elements of a biosphere reserve, the basis for the establishment of such a reserve seems to be available in the Kazbegi region. Without directly pointing towards the Kazbegi region as a biosphere reserve, participants of the focus group discussions already mentioned this combination of nature, tourism and local agri-food products (*"If foreign tourists arrive here, they will be more interested in our wild nature and natural resources and we will supply them with healthy food. It is desirable to treat them with local, organic food"* (2_FGD3); *"Tourists don't seek comfort in Georgia and don't go mountaineering to Kazbegi to find comfort there. Peasants should be briefed that if they invite tourists to their houses and make them try their home made honey it will be the best attraction to them. That's what they love most of all"* (5_FGD2); see chapter 4.4.2). Although currently only summer tourism takes place in the region, as pointed out above, perspectively winter tourism could also be developed which would lead both to additional employment opportunities and a market for local agri-food products during winter time.

Research region: As outlined above, biosphere reserves are also regions of education and research. To a small extent, this also already applies to the Kazbegi region. As learned from the interviewees during the pre-study, several university projects have been implemented in the region, focusing for example on sustainability or the historical development of the region. The AMIES II project, in which this study is embedded, is also such a project.

Governmental support: The Strategy for Agricultural Development in Georgia has the aim to substitute imports and to strengthen agricultural value chains in rural regions. One aim is also to support the strategic development of "Protection of Geographic Indications" which is already in place for certain types of cheese and Chacha (Ministry of Agriculture of Georgia 2015 ff.). This could be particularly relevant with regard to the implementation of linkages of agriculture and tourism within the framework of a biosphere reserve. In addition, a relevant factor could be the support of organic agricultural production and certification by the Ministry of Agriculture of Georgia (Ministry of Agriculture of Georgia 2017, p. 35). Moreover, the government also offers training in agritourism (Georgian National Tourism Administration 2018b, p. 23), which could be helpful to improve the service skills of tourism providers who are originally from the agricultural sector and have no (or not much) experience in providing professional tourism services.

Involvement of the local population and implementation: As the above statements show, the local population is already thinking about ways to link the sectors. Furthermore, the participation in this study has revealed an interest of the local inhabitants in the future of the Kazbegi region. The local population is the driving force of the development. As pointed out above, in particular the participants of the focus groups were interested in innovations and ways to develop the region, which might also be an indicator of an entrepreneurial spirit, which is important with regard to endogenous economic development and adjustment to changes. The active involvement and interest of the local population of the Kazbegi region could also provide a good basis for the establishment of a Local Action Group (LAG), in line with the LEADER approach, focusing on developing the Kazbegi region as a biosphere reserve. As the pre-study has shown, there is already a successfully operating LAG in the Kazbegi region which could be used as a good practice example for the establishment of such a group. Referring to the LEADER approach, such a participatory bottom-up approach contributes to creating ownership among the local participants. This would in particular be relevant for the sustainability of endeavors with regard to a biosphere reserve.

Linking agri-food and tourism within the framework of a biosphere reserve in the Kazbegi region

Linking agriculture and tourism in a sustainable way and offering regional agri-food products is an essential feature of a biosphere reserve. As the results have shown, the Kazbegi region potentially also offers various options in this respect. In the following, the vision of linkages between agriculture and tourism within the framework of a biosphere reserve in the Kazbegi region is presented.[123]

A brand and quality seal for the Kazbegi region and its products

In the vision, the Kazbegi region is branded and promoted through a concept of regional marketing. It furthermore has an umbrella brand, which covers other brands or quality seals for both agriculture and tourism that exist in the region.[124] This umbrella brand also covers a brand for regional agri-food products. Members of this brand produce according to specific quality standards and are allowed to use the label of the brand for their products. This label contains an image of Mount Kazbek[125] as a distinguishing symbol of the region, as well as information on the products and their origin. By means of this label, products from the region which are produced under the brand are easily recognizable.

In order to provide incentives to the tourism sector to offer locally produced products, a quality seal for the tourism sector is in place. In line with the label for local products, the seal is a small version of the Mount Kazbek. Depending on the amount of locally produced food that the service providers (e.g. hotels and restaurants) in the region offer, they receive a different type

[123] The following descriptions are greatly simplified. However, since this is only the stage of the vision and not yet a mission, they shall serve as an impulse for thoughts about the potentials of the Kazbegi region, and not yet for real recommendations regarding the development of such structures.
[124] Following the example of the Biosphere Reserve Rhön and its brands, which has been briefly outlined above.
[125] On a regional level, branding of the Kazbegi region by using the Mount Kazbek as a symbol is one of the strategic aims (Local Action Group Kazbegi 2016, p. 11).

of seal: Either with one, two or three small Mount Kazbeks.[126] Since tourists who travel to the region show an interest in local food, the higher the number of these “Mount Kazbek seals” at the entrance door of a hotel or restaurant, the higher the probability of attracting additional guests. In this way, the quality seal is beneficial for both the tourism enterprises and the local agri-food producers: it increases the demand for local agri-food products by the tourism sector and thus enables the agri-food producers to sell and earn more,[127] and the tourism enterprises are better supplied with local food.

As in other biosphere reserves, in the vision of optimal linkages for the Kazbegi region the focus is also on organic products. These products are certified and unified under a quality seal for organic products. The organically produced and certified products cover wild herbs and berries, veal and trout (in line with table 8 in chapter 4.5).

In addition, local restaurants offer traditional local products, which indirectly provide information on the region and the culture in the Kazbegi region. The focus with regard to dishes in the Kazbegi region is on local herbs, since most of the dishes offered in the region are also prepared in other regions of Georgia but receive their local “uniqueness” through the use of these herbs. This information was for example provided during the focus group discussions *(“We cook Khinkali quite a different way. Our Khachapuri also differs from others. Pkhlovani, food made of nettle and ten other different herbs that are medicinal ones as well. […] They are cooked in other regions of Georgia as well but our recipes is unique”* (2_FGD3)).

In the vision, additional seals for sustainable tourism are in place. All the brands and labels have been developed with marketing experts from outside the region (as recommended by the expert of PIN) in cooperation with the local population. The local population has been included in order to develop the brand bottom-up and create a sense of ownership. In this way, the local population stands behind the brand and is more willing to become a member of it and promote it.

Area-based strategies for linking agriculture and tourism in the Kazbegi region

In the following, some thoughts regarding area-based strategies for linkages of agriculture and tourism in the Kazbegi region are discussed. The results of the study have corroborated the findings in the secondary literature that the Kazbegi region is generally characterized by a core-periphery structure, with the core (Stepantsminda and Gergeti) being active in tourism and the surrounding villages focusing on agriculture. Thus, at first view, one might think of linking tourism and agriculture following the model of Johann Heinrich von Thünen (Thünen 1921), in the sense that Gergeti and Stepantsminda as the tourism centers correspond to the big city in the model of von Thünen, while the surrounding villages are active in agriculture (with the

[126] Comparable to the number of silver thistles used in the quality seal of the Biosphere Reserve Rhön (Dachmarke Rhön 2015).
[127] This is still based on the assumption of scenario 1, to which this vision belongs, that an increase in agricultural output is possible and other hurdles are overcome.

closer villages focusing on milk and dairy, and villages such as Kanobi on extensive cattle keeping) and deliver their products to the tourist center.

However, even though a general core-periphery structure is visible, taking a closer look at the villages provides a more differentiated picture with regard to the relation of agriculture and tourism and the respective potential for linkages of the sectors. For example, the village Juta, which is remote and not easy to access, is also successfully involved in tourism; this is therefore an exception of the core-periphery structure and consequently also does not support a linkage/supply structure as suggested by von Thünen. Thus, independent from an overall structure, it would be recommendable to establish linkages which fit to the specific local conditions. This would also be in line with the idea of Lacher and Nepal (2010, p. 94), who, based on a study of villages involved in agriculture and tourism in Thailand, recommend the establishment of village-level strategies which take into account the uniqueness and individual strengths of a certain area (Brohman 1996, p. 65).

However, although tailoring the linking options to the current strengths of a specific area or village seems to make sense (and is also in line with the LEADER approach, see chapter 3.2.1), such strategies cannot be considered static. This means that an option which is suitable for a village today might not be appropriate anymore in the longer term.[128] The villages which are named in the following seem to provide good opportunities with regard to the implementation of specific ways of linking agriculture and tourism based on their current endowments and features. However, since the region is changing quite dynamically, as reflected for example by the tremendous increase in tourism numbers during recent years, it might well be possible that in the future the current examples will no longer apply to these villages.

Furthermore, it is often the case that one village serves as a role model which leads to other villages following this example. This already applies to Stepantsminda, which might serve as a positive example for tourism development for other villages in the region. However, although there are currently villages which offer a lower level of services (in comparison to the hub Stepantsminda), this might not necessarily be a comparative disadvantage. For instance, the increase in tourism enterprises and accommodation in Stepantsminda might also change the atmosphere from a quiet mountain village to a more lively tourism hub. While this might be positive for some tourists, others might look for the exact opposite: quiet villages, away from “civilization” which offer the aforementioned “authentic” experiences, even if this means doing without an internet or phone connection. The result that shows that tourists who travel to the Kazbegi region are often interested in nature and authentic local experiences even supports the potential spread of tourism to other currently more natural and remote villages. An example of this might be Juta, which is remote and without stable phone connection, but still attracts a high number of tourists due to the surrounding nature. Nevertheless, with an increase in infrastructure the tourist services offered in these villages might also change and thus also lead

[128] An example of the dynamic development of a region involved in agriculture and tourism has also been provided by Hermans 1981, see chapter 3.2.2: In the case of Fuenterrabia in the Basque country in Spain agricultural production was first stimulated by tourism since it provided a seasonal market for meat, milk and other farm products, but in the long run, the growth of tourism in this area had a negative effect on agriculture since land prices rose drastically for agricultural producers, and tourism then prevailed.

to a change in agriculture, landscape, and so on. Furthermore, depending on the comparative advantages, villages might start to focus on one specific field of production. However, in this case, it must be ensured that no monoculture approach is chosen which could harm the ecology and thus also agricultural outcome. All in all, an eye should be kept on such developments in order to act if such biases become too strong (e.g. too much tourism, or monoculture agriculture). Thus, as change will always be there, the following area-based options for linking agriculture and tourism provide only a snapshot for the vision and might look totally different in the mid or long term.

In the vision, Stepantsminda, Gergeti and Juta are villages with a focus on offering accommodation for tourists, which is also based on actual conditions and the results of this study. Most of the accommodation providers source regional agri-food products from other entities and are not involved in production themselves. Some small-scale guesthouses also have a vegetable garden and some animals which are used for the provision of food to the tourist guests. However, the main focus of these villages is not on agriculture, due to the fact that the areas close to the houses are no longer sufficient for both tourism and agriculture. Actors in the tourism sector have also received training within the framework of a development project and are able to provide professional tourism services.

In Stepantsminda, besides hotels and restaurants there is a cooperative shop, established with the help of experts. This location is chosen because it is the village that is most easily accessible, and most tourists, as potential buyers, are there. The shop is run jointly by several agri-food producers (as recommended by participants of FGD2). In this shop, local agri-food products are sold. Among them are local potatoes, vegetables, lettuce, strawberries, honey, herbs and herbal tea, sea buckthorn jam, local dairy products and meat. In order to offer animal products in line with food safety standards, a slaughterhouse and a milk collection center are established in the region.[129] In addition, some products which are not available in the region are imported. Herbal teas and honey are also available in small attractive packaging to be taken home by tourists as a food souvenir. In addition, small vacuum-packed wheels of cheese which have a long durability and can easily be transported are offered. All local products belong to the brand for agri-food products and are labeled with the image of Mount Kazbek. The organically produced products are tagged with the organic version of the label. Thus, together with the producers who act as salespeople, the labeled product provides additional independent information on the quality of the product.

In addition to the cooperative shop, a weekly market takes place in Stepantsminda, where local producers who are not part of the cooperative shop can also present their products. The market stands can be rented cheaply (referring to the example provided by the representative of GFA from Samtskhe-Javakheti) and also support the market linkages of poorer, small-scale agri-food producers. The government supports these market stands financially in order to prevent informal economic activities in the region. During winter time, the market only takes place once a month and is located indoors in a hall in the center of Stepantsminda. In such a public hall,

[129] This is based on the assumption of the scenario „Perfect Link“ that there is enough agricultural output available, so that also the investment in a slaughterhouse and a dairy makes sense from an economic point of view.

other events related to local food also take place. Among them are small fairs where local products are presented, local dishes are offered, and cultural entertainment is provided (referring to the recommendation of the representative of GFA that more leisure activities should be offered). In addition, the hall is used as a platform for exchange between agri-food producers and tourism sector representatives. Furthermore, workshops and advisory events are implemented there.

In villages other than Stepantsminda, Gergeti and Juta, the focus is on agricultural production, implemented in an environmentally friendly manner. Although different types of agriculture are mixed in these villages (in order to avoid monocultural structures), a certain focus of production is there: While for example in Kobi and Akhaltsikhe livestock keeping is prevalent, in Sioni and Arsha the focus is on beekeeping and vegetable production.[130]

In the vision, a "community-supported agriculture"[131] is in place in the Kazbegi region. In community-supported agriculture "[…] consumers buy products directly from the farm, and pay for them in advance. Farmers do their best to produce sufficient quantities, quality of food and variety to meet consumers' needs" (Junge et al. 1995, p. 1 f.). According to Galt (2013, p. 360), community-supported agriculture has various advantages such as eco-friendly agriculture, mixed landscapes and a strong connection between producers and consumers.[132]

Though not focusing on accommodation for tourists, the villages with an agricultural focus are also suitable for offering agriculture-based tourist attractions. For example, they sell products at the farm gate or provide tourists with local dishes at their houses (which was recommended by various experts in the course of this study). The agri-food producers are also members of the agri-food products brand from the Kazbegi region and thus their products are labeled accordingly. These villages and the related farms or food-producing households are marked on "food maps".

Some of the producers also offer to show tourists their production and processing, or let them participate in these activities. For example, some dairy producers offer events where tourists can produce their own soft cheese while tasting Georgian wine. Similar to producers involved in dairy production, beekeepers offer guided tours with information on beekeeping and its relevance for nature, and invite tourists to watch the production process (as recommended by an expert of FAO (E5)). In order to earn additional money, they also sell their home-made honey at their houses.

In the vision, as in other biosphere reserves, some bigger farms in the region also offer professional farm stays. Beforehand, financed through development projects, those involved have conducted study tours to observe best practice examples in other countries.[133] Thus, these

[130] Similar structures were also visible during the pre-study.

[131] This is the English translation of the German term "Solidarische Landwirtschaft". Thus, the term "community" must not be taken literally in the current study; instead, the solidarity might be possible on various levels, not only on that of the concept of a community.

[132] The implementation of community-based agriculture is based on ideas of contract farming that resulted from the current study.

[133] The implementation of such study tours was recommended during the pre-study by the former head of the Sakrebulo of the Kazbegi Municipality.

farms are attractive and offer renovated sleeping rooms and bath rooms. As far as possible, they offer local dishes prepared from their own locally grown products. In addition, the tourists can watch or participate in the production process. These farms are also marked on the food map, since they also provide food to hikers or other people who do not stay overnight.

In the vision, sheep breeders offer “adventure” events, such as spending a day with a shepherd, camping at the pasture, having a lamb barbecue in the evening and sitting around a campfire. There is also a trout farm in the valley of Sno, which offers accommodation and a restaurant close to the river where the trout live. The tourists also have the opportunity to catch their own trout there and let it be prepared by the cook of the restaurant.[134] Other farms offer cooking classes in which tourists are shown how to prepare Khinkali for example, or are introduced to the herbs that are typically used in the region. In addition, they have specific offers where children are shown the animals or are taught where milk comes from.[135]

Linkages between agriculture and tourism take also place outside the villages or farms. For example, tourists have the opportunity to visit areas where wild plants such as sea buckthorn, herbs or flowers grow and also to collect plants for themselves. This is implemented with a local guide, who informs the guests about the specificities of the plants and how to sustainably collect them. In such a framework guided tours on herbs and medicinal plants are also offered by local inhabitants.

In the natural or agricultural landscapes tourist activities not directly linked to food or food production are offered. For example these can include hiking, horse-riding and biking. During winter time snow shoeing and other activities which do not harm the natural environment or resources for agricultural production are also offered. Some hiking routes are equipped with information on the geography, flora and fauna and the history of the region.

In addition, referring to the framework of a biosphere reserve, there is an information center established in the center of Stepantsminda, where information on the region and the biosphere reserve is provided as well as information on activities, accommodation, cafés and restaurants. Tourists also are provided with the food map there.

In the vision, the above-mentioned activities are implemented in areas defined as the buffer areas and transition areas of the biosphere reserve, while the core area of the biosphere reserve is the Kazbegi National Park (see above).

End of the digression

[134] This vision is based on the ideas of a trout farmer from the valley of Sno, which were presented during the pre-study.
[135] Several such events are for example offered by farms which belong to the German DLG and could serve as examples.

Zooming out from this vision within the scope of the "Perfect Link" scenario, the implementation of the described linkages within the framework of a biosphere reserve depicts the optimal future for the Kazbegi region – based on the starting assumption that it is possible to overcome hurdles in agriculture and in particular increase output. First of all, small-scale agri-food producers would have the opportunity to increase their income via various options for the sale of their products to tourists or intermediaries. Thus, with regard to the theory of cultural lag of William F. Ogburn, this would be a way for them to adjust to the changed framework conditions in agricultural production. Besides this, sustainable agriculture and tourism would be in place, which would contribute to a balanced, multi-sectoral development of the region and allow for a virtuous circle of linkages between agriculture and tourism.

However, as such best case examples are extremes, the "Perfect Link" scenario and the vision in particular are based on several quite rigorous assumptions which must be taken into account. Naturally, currently the features of the Kazbegi region are not sufficient to define it as a biosphere reserve according to UNESCO or to implement exactly the linkages which were presented. However, based on the outlined scenario and the vision, in the future certain aspects could potentially be developed in this respect, together with the local population, in order to implement a sustainable combination of agriculture and tourism and a sustainable connection of socio-economic and environmental issues in the Kazbegi region.

5.3.2 Scenario 2 – "Pure Tourism"

In contrast to the "Perfect Link" scenario, the "Pure Tourism" scenario is based on a starting situation in which no increase in agricultural output is possible. For this reason, in addition to the households who are already active in tourism, the small-scale agri-food producers will also become active in tourism. This is based on the assumption that without a potential increase in agriculture, there is no incentive for small-scale agri-food producers to stay in agriculture. Consequently, they will decide to leave the sector in order to increase their income via activities in the tourism sector. Based on this assumption, in the long run all households in the Kazbegi region will be active in tourism.[136] This is supported by the above-mentioned statement by the representative of PIN that people who start working in tourism are *"[...] out of agriculture immediately"* (E4) and by Heiny (2018, p. 138 f.), who stated that the growth in the tourism sector seems to induce a decrease in households which are active in agriculture. As outlined above, Heiny (2018, p. 145) also found that the intention to enhance activities in the tourism sector is mostly influenced by the close social surroundings. Thus, if someone knows a person from their close circle of acquaintances who is active in tourism, this might also strengthen the intention to work in tourism. Because many people have become involved in tourism in the Kazbegi region in recent years (e.g. reflected by a tremendous increase in guesthouses, see chapter 2.5), there is a high probability of knowing someone in the social surrounding who is involved in this activity. Hence, this might also influence the intention of others and thus contribute to an even higher number of entrepreneurial activities in the tourism sector (assuming

[136] This is based on the additional assumption that it is only possible to be involved in agriculture and/or tourism; other professional activities do not exist.

that the intention would go hand in hand with the actual implementation, which is however not necessarily the case and would have to also be studied).

Although there might be a certain number of people who do not plan to become active in tourism, it is assumed that they can be omitted in the long-term consideration under this scenario. For example, this might apply to older people who are only active in agriculture and not knowledgeable in the field of tourism and/or are no longer open to change. In addition, as the pre-study has shown, more and more villages are depopulated because of the death of the older people, or because young people leave these areas. This means, that in the longer term these people will also not play a role in the development of the Kazbegi region.

As in case of the "Perfect Link" scenario, after overcoming some of the shortcomings of the tourism sector, in the "Pure Tourism" scenario eco-tourism is also initially implemented in the region, which is supported by the current study. However, going one step further to consider the tourists who are interested in nature and eco-tourism experiences, a hurdle is encountered: As pointed out above (see chapter 3.2.2 and chapter 4.4 on the results of the study), this type of tourist is usually also interested in local food (Lacher and Nepal 2010, p. 78; Torres 2003, p. 548). This is also confirmed by the results of this study. Hence, the question arises of how to supply visitors with local food if in the long-term there is no agricultural producer left in the region.

This would simply not be possible under this scenario. The following sentences roughly outline what would happen in the worst case under this scenario: Firstly, agri-food would be imported from other regions or countries, but as discussed above, such imports lead to an increase in leakage (Brohman 1996, p. 56; Telfer and Wall 1996, p. 638; Bélisle 1983, p. 498). Furthermore, the absence of agri-food producers in the region would also lead to a lack of landscape conservation through agriculture. As pointed out under scenario 1 ("Perfect Link"), preserved rural landscapes are attractive for tourists who are interested in experiencing nature. Thus, the combination of a lack of local agri-food products in particular and the loss of local agriculture which contributes to shaping rural landscapes would result in a loss of attraction of "alternative" or eco-type tourists. In turn, other types of tourists might be attracted who do not particularly value the natural resources of the Kazbegi region (and are in favor of imported food, e.g. due to food safety concerns). Continuing this line of thought, in the worst case, this might result in unsound environmental practices which could have negative effects on the environment of the region (following Brohman 1996, p. 53, p. 58) and thereby affect other livelihood concerns (Shah 2000, p. 32). Thus, through focusing only on tourism, a vicious circle with regard to the long-term development of the Kazbegi region would be initiated. This is a very simplified description of the process; however, it might provide a basis for thoughts regarding the sustainable future of the Kazbegi region.

On a household level, in the long term, this "Pure Tourism" scenario will allow a household to be active only in tourism. As outlined above with regard to the "Perfect Link" scenario, focusing on just one source of income is not favorable with regard to risk reduction and the ability to cope with shocks (Chambers and Conway 1991, p. 11).

With regard to the regional level, the "Pure Tourism" scenario is not in line with the multi-sectoral approach of the New Rural Development Paradigm or the LEADER approach for rural development, due to its focus on only one sector. Thus, also on a regional level it is not suitable with regard to risk reduction, since the focus on only one sector might increase the above-mentioned risk of dependency (Torres and Momsen 2004, p. 298). This applies in particular to the tourism sector as an "an industry with fashion and vogues" (Greenwood 1972, p. 88; cited in chapter 3.2.2), which may lead to a sudden loss of interest of tourists in a certain area. In addition, the seasonality of the sector (Telfer and Wall 1996, p. 644) must also be taken into account (e.g. tourism in the Kazbegi region takes mainly place during summer). Furthermore, the political situation in a region (as pointed out above, in the case of the Kazbegi region this might concern relations with Russia) might lead to sudden changes with regard to tourism, which makes the dependency on one sector even more risky. Natural hazards might also impose a risk with regard to such a mono-sectoral dependency (Bundesministerium für wirtschaftliche Zusammenarbeit und Entwicklung 2010-2019).

Going back to the conceptual framework of the study, this scenario also offers an opportunity for the small-scale agri-food producers to adjust to the changes in the framework conditions for agricultural production, even though this would mean leaving agriculture. Consequently, this would also mean moving away from the research questions which implicitly disregarded other options than those of staying active in agriculture because of being based on the assumption that there would be enough output to be marketed. However, admittedly, earning income through becoming active in the tourism sector might also be a way to adapt to the changes. Nonetheless, as described above, this scenario could result in a vicious circle with regard to the development of the Kazbegi region. Thus, in summary, although this scenario might be possible in a situation where the tourism sector continues to grow, it is not recommendable from the perspective of the strategic sustainable development of the Kazbegi region.

5.4 Closing the Research Gap?

One aim of the study was to contribute to the knowledge on linking agriculture and tourism as a measure to improve livelihoods in the Kazbegi region. To the knowledge of the author, this has not been in the focus of previous research. More specifically, the aim was to identify opportunities for local small-scale agri-food producers to improve their income-generating behavior and to adapt to the changing framework conditions for agricultural production. This was based on the assumption that one way to adjust to the changes could be linking agriculture and tourism via marketing regional agri-food products to the tourism sector in the Kazbegi region. To this end, the study tried to gather more information on the agri-food chain in the Kazbegi region as well as information about the requirements that local tourism-service providers have when buying locally produced products. Another aim was to identify possible linkages between agriculture and tourism through marketing agri-food products in the region. The research gaps could be closed by answering the following research questions:

- What are the current bottlenecks in the agri-food chain in the Kazbegi region, in particular at the stage of selling products to the buyers, focusing on tourism service providers and tourists? What are the opportunities?
- How could linkages between the local agri-food sector and the local tourism sector be established?
  - Which requirements do hotels and guesthouses have with regard to sourcing local agri-food products?
  - Which local agri-food products could be suitable for marketing to the tourism sector?
  - Which marketing options/ways of linking the sectors could be appropriate to tap potentials?

In order to answer the research questions, an onsite qualitative study in the Kazbegi region and in Tbilisi was implemented. The study encompassed exploratory interviews and observations, focus group discussions with market-oriented farmers, small-scale agri-food producers and representatives of the tourism sector from the Kazbegi region as well as expert interviews. The results of the study provided in-depth insights on the bottlenecks of the agri-food chain in the Kazbegi region, which was conducive for answering the **first research question**. The main **bottlenecks** at the stage of input supply are a lack of access to finance, land resources and manpower as well as a lack of access to modern machinery. A further hurdle is the lack of an input supply store in the Kazbegi region. At the stage of production, scarcity of arable land, small plots and old equipment impede efficient production. At the stage of processing, the lack of processing facilities and equipment is a severe bottleneck. This applies in particular to dairy and meat production, since there is neither a slaughterhouse nor a milk collection center or dairy in place in the region, which would be essential in order to implement food safety standards. Furthermore, the lack of processing facilities is a hurdle for producing a greater variety of certain products as well as for adequate packaging or preserving of food. Processing often takes place in home-based situations, and professional packaging or labeling does not take place. A large share is consumed by the producers themselves or by the family and friends of the producers, which does not contribute to income generation. The low amount of output is a major bottleneck with regard to commercialization. When agri-food producers have sufficient output, this is often sold to traders, who pay inferior prices to the producers due to their high bargaining power. The exchange of products (barter) between food producing households also takes place, which consequently does not contribute to the cash income of the households. A small share of products is also sold to hotels and guesthouses in the region; however, the requirements of the hotels (see below) are a hurdle in this regard. A significant bottleneck is the lack of warehouses or storage facilities in the region. This leads to low prices, since products must be sold straight after harvest, and furthermore to supply gaps.

Agri-food is provided directly to tourists as the final consumers in situations where the agri-food producer also owns a guesthouse, hotel or restaurant and offers food from the own production. Tourists are also provided indirectly with local agri-food through intermediaries. This includes shops, restaurants, hotels and guesthouses which are not owned by producers of agri-food products. However, a bottleneck in this regard is again the low output of agricultural production. In addition, the places to buy or consume local agri-food products are often difficult to find for tourists. The other side of the coin is that for the agri-food producers there is a lack of locations to sell products, e.g. market places. Since most of restaurants, shops or hotels are located in Stepantsminda, transport costs are also a hurdle for small-scale agri-food producers from more remote villages. A bottleneck with regard to improvements in the agri-food chain is the prevailing low level of knowledge about professional production and marketing of the small-scale agri-food producers. A lack of sufficient advisory services contributes to this.

The question on **opportunities** of the agri-food chain could also be answered through the study, but much less extensively than in the case of the bottlenecks, which might also be an indicator of the relevance of the study at hand. One of the main opportunities with regard to marketing of local agri-food products is the high quality of the agri-food products. In addition, the later harvesting season could be a comparative advantage for the region. Furthermore, the fact that the agri-food producers often cover several stages of the agri-food chain themselves (which is a characteristic of a short food supply chain) could be turned into an opportunity with a more professionalized implementation, since it also means that the value generation (e.g. through processing) often stays in the hands of the producers. More opportunities which are also closely related to the agri-food chain are presented within the future perspectives of linking agriculture and tourism.

The **second research question** was subdivided into several questions. First of all, an assessment was made of the **requirements** that tourism service providers in the region have with regard to sourcing local agri-food products. This question could be answered in detail by analyzing the data gathered in the course of the study. It was mainly answered based on the data of the expert interviews. Among the main requirements are the adherence to food safety standards in the course of production and processing, a sufficient and constant amount of products, a high and constant quality of the products, and the price. In some cases organic production is also a requirement with regard to buying the products. In general, the listed requirements do not apply to all the tourism service providers. The call for more formal procedures was expressed by larger entities in particular.

While the preceding research questions could be satisfactorily answered, this was more difficult in case of the question of which **products** could be suitable for marketing to the tourism sector. The study provided the information that in general, due to the high quality, the tourism service providers seem to be interested in buying locally produced products, and products such as honey, potatoes, herbal tea and cheese are already offered sporadically in case they are available. However, in order to make a statement about which products are suitable for being marketed professionally to the sector, additional research would be necessary. With the qualitative research approach, it was possible to obtain background information on the products and their potential demand in the tourism sector. However, the study could not provide quantitative data on the amount of products that could potentially be produced in the region. While for some products (dairy products, meat, potatoes), the calculations of the Georgian project partner (see Shavgulidze et al. 2017 and Theissen et al. 2019) could be included in the considerations, such quantitative data is missing for other products. Furthermore, although some figures on the current output are provided by the Ministry of Agriculture, additional figures on the output demanded by the tourism sector would be needed. Thus, in order to assess which products could be marketed to the tourism sector, an additional study would have to be implemented to gather quantitative data on the demand and output of local agri-food products. The results have also shown that the requirements for specific products differ among the tourism service providers. While for example for some entities buying animal products such as meat and dairy would only be an option with a slaughterhouse or a dairy in place, others do not have this requirement and trust in the sellers is sufficient for them. Nevertheless, in order to answer the research question thoroughly, an additional cost-benefit analysis of the investment in such processing facilities would be needed. In summary, at this stage, the question can only be answered with the general statement that those products are suitable for being sold to the tourism sector which fulfill the requirements of the tourism service providers and can be produced in a sufficient amount without harming the environment of the Kazbegi region. As long as no quantitative data is available to contrast the potential output with the demand and to analyze the potential investment decisions, any other answer could potentially be misleading.

The next question focused on **ways of linking agriculture and tourism** in the region, or rather marketing options which could possibly be appropriate to tap potentials. Due to the fact that the study revealed that there might not even be enough output to be sold (which was implicitly assumed at the beginning of the study) an attempt was made to answer this question using two scenarios: One scenario in which a sufficient amount of output is produced in order to be sold to the tourism sector, and a second where this is not possible. Thus, options for linking the sectors could only be discussed within the framework of the first scenario. However, based on these quite rigorous assumptions, the research question could be answered. In particular, ways of linking agriculture and tourism through direct interaction of the producer and the final consumer seem to be suitable. This is based on the fact that through such short food supply chains the value generation stays with the agri-food producers and thus contributes to their income and not to that of someone else. Furthermore, the product is strongly embedded in information on the origin of the product, which contributes to trust and also to a potential increase in the demand of the consumers. Hence, the most suitable options seem to be selling at the farm gate, or in situations where producers also own a guesthouse, supplying the guests directly with their own products. Nevertheless, options where the product is embedded in less information (since the product is not sold by the producer, or not at the place of production, or both) might also be suitable for linking agriculture and tourism against the overall aim to improve the income generation of small-scale agri-food producers. Options for linking agriculture and tourism include for example the implementation of a cooperative shop or market stands. Furthermore, a food map could be created, or food tours to the places of the producers could be offered.

Where products are sold to the tourism sector and not directly to the tourists/final consumers, contract farming could be a way to improve the situation of small-scale agri-food producers. Food souvenirs could be sold via several types of linkages (see e.g. figure 16, chapter 4.5), including intermediaries. It must be taken into account that ways of linking agriculture and tourism can only be implemented if there is a sufficient amount of output available, and, in particular if the products are marketed via intermediaries, if the requirements of the tourism sector are fulfilled. Thus, also for the elaboration of sound recommendations with regard to ways of linking agriculture and tourism in the Kazbegi region, quantitative data on the demand

and the available output would be necessary. Furthermore, the availability of NGO and government support in these fields would have to be assessed more thoroughly.

Although the potential of linking agriculture and tourism in the Kazbegi region was discussed using scenarios with strong assumptions, this way of discussing the results also had advantages. For example, it allowed the author to abstract from the pure research data and develop potential perspectives of development of the Kazbegi region more openly in order to use them as a basis for future discussions.

Going back to the overall aim of finding ways for small-scale agri-food producers to adapt their income generating behavior to the changes in the framework conditions for agricultural production, as described with the help of the theory of cultural lag of William F. Ogburn, the current study provided several valuable results. However, as pointed out above, for final recommendations additional quantitative research as well as interviews directly with tourists would be needed. Unfortunately, due to financial and time constraints this was not possible within the framework of this study. Nevertheless, the particular strength of the study is that it shows potential developments of the Kazbegi region and provides incentives to think more about the future perspectives of the region and its inhabitants.

6 Conclusion and Recommendations

The main aim of the study was to find ways for small-scale agri-food producers to adapt to changes in the framework conditions for agricultural production by marketing their products to the tourism sector. To this end the research questions focused on the bottlenecks in the agri-food chain, the requirements of the local tourism sector for the sourcing of local agri-food products, and also focused on the products and potential ways to link the sectors. These questions were embedded in the framework of the theory of cultural lag of William F. Ogburn and the approach of linking agriculture and tourism within the field of rural development. In order to cover both the current situation and to develop perspectives for linking agriculture and tourism, the results concerning the future perspectives were discussed using two scenarios.

As the results have shown, there are various options for linking agricultural and tourism via marketing agri-food products in the Kazbegi region. However, the opportunity to link the sectors is based on the assumption that an increase in efficiency in agriculture is possible. If not, a strong tendency towards moving into a purely tourist orientated future of the Kazbegi region is shown, since in this case small-scale agri-food producers would not have an incentive to stay in agriculture and would also move to the tourism sector. This would also be an efficient way of adaptation to the changed framework conditions in agricultural production, as outlined with regard to the theory of cultural lag of William F. Ogburn, because it would be a way for the former agri-food producer to generate income. However, with regard to the overall development in the Kazbegi region, in the long term this could also lead to a vicious circle, in particular relating to environmental sustainability and risk reduction.

Consequently, it is strongly recommended that the hurdles that exist with regard to linking agriculture and tourism should be overcome, which means first of all to improve the efficiency of agriculture in the Kazbegi region. This could potentially be supported through improvements in land structures, access to adequate financial products, access to adequate large-scale and small-scale machinery and processing equipment, through the establishment of warehouses and an input supply store and, above all, through awareness raising and consultancy, in particular in the field of production efficiency and the marketing of agri-food products. In addition, the tourism sector should be professionalized and developed with a clear focus on alternative tourism in order to attract tourists who are interested in nature and local food and to conserve the environmental resources of the region, which are also essential for agricultural production.

If the hurdles for linking agriculture and tourism are overcome, which are mostly due to inefficient agricultural practices, there might also be incentives for the inhabitants of the Kazbegi region to remain active in agriculture, which would then also allow for linkages between agriculture and tourism. Among such linkages, in particular options which can be considered a short food supply chain might be beneficial for the small-scale agri-food producers, since in these cases the income generation stays with the producers. In addition, selling products to local tourism sector providers could be implemented in order to generate income. Thus, such linkages would also be a way for the small-scale agri-food producers to adapt to the changed framework conditions in agricultural production. However, it must be taken into account that the data is not representative and the conclusions can only be drawn with reservations, since the different perspectives of the interviewees must be taken into account (outside/meta perspective of experts, possibly driven by the mission of their organization or company; inside perspective of the local population). For more detailed statements, additional studies would be necessary. In particular, a quantitative assessment with regard to the options to link agriculture and tourism would be necessary.

As discussed in the “Perfect Link” scenario, in the case of an increase in output in the agricultural sector, a virtuous circle of linking of agriculture and tourism could potentially be initiated, which would also be conducive for the development of the region. The development of the Kazbegi region as a biosphere reserve with a focus on linkages of agriculture and tourism is currently only a vision and not yet a mission. Nevertheless, based on strict assumptions, within the framework of this vision all positive effects of linking agriculture and tourism in the region might come into effect, including potentials for income generation of small-scale agri-food producers, sustainable tourism and a low level of leakages, which would all be conducive with regard to the sustainable future development of the region. Taking these positive effects into account, despite the strong assumptions, it might also be conducive to discuss the results and the potential options of linking the sectors bottom-up with the local population in the Kazbegi region.

In comparison to a mono-sectoral development approach, (e.g. tourism only) where inter-sectoral linkages are not possible, linkages of agriculture and tourism might contribute to reducing risks both at the regional and at the household level. Thus, the strategy of fostering both agriculture and tourism and tapping potentials for linking the sectors can be considered a multi-sectoral approach that would counteract risk exposures: Firstly, with regard to the general dependency on one sector, but also with regard to the tense relationship with Russia. Furthermore, as regards risk reduction at the household level, linking agriculture and tourism increases the ability to cope with shocks based on strategies of diversification and pluralism of income sources (compare Chambers and Conway 1991, p. 11). In addition, linkages of agriculture and tourism could be implemented as an area-based strategy in line with the LEADER approach.

Being also in line with the multi-sectoral approach of the New Rural Development Paradigm and taking into account the Sustainable Development Goals, linking agriculture and tourism might provide an optimal strategy for development of the region. Thus, besides the measures for the improvement of the agricultural sector and the professionalization of the tourism sector, the macro policies concerning the development of the Kazbegi region should also be aligned to the achievement of a multi-sectoral development of the Kazbegi region.

In addition, seeking closer ties with the EU (for example within the framework the Deep and Comprehensive Free Trade Agreement) might also be conducive for improvements in agriculture and in food safety standards, which are strongly required by the tourism sector representatives. Thus, applying such international standards in the Kazbegi region might also provide good opportunities with regard to linking agriculture and tourism. However, implementing new standards must be accompanied by awareness raising and consultancy, and in any case this will probably still be a long process. However, as pointed out in the BTI Country Report on Georgia: ”[…] EU approximation is not the solution, but a tool to adequately address existing national problems by applying European values to the specific local reality, strengthening the sense of community and common good in addressing pressing socio-economic issues such as employment and supporting Georgia’s unique environment and culturally diverse heritage, not only for foreign tourists, but for itself” (Bertelsmann Stiftung 2018, p. 40 f.).

7 Summary

After the collapse of the Soviet Union, the framework conditions for agricultural production in the former Soviet republics have changed considerably, characterized in particular by a turning away from large-scale agricultural production. This also applies to the Kazbegi region in Georgia in the Greater Caucasus. While in former times the local agricultural production and income generating behavior were adjusted to the framework conditions (e.g. the availability of pastures for sheep on today's Russian territories or the free supply of gas for large-scale greenhouse vegetable production for export), during recent years this is no longer the case (e.g. since pastures and free gas supply are no longer available). Amongst other things, this is reflected by a large proportion of small-scale agri-food producers in the region who mainly produce for their own consumption and suffer from a low level of income. However, due to the attractive mountainous landscape, in the course of recent years the tourism sector in the Kazbegi region has also grown considerably.

The presence of both agriculture and tourism in the region might offer the opportunity to link both sectors and thereby improve the socio-economic situation of small-scale agri-food producers. Based on this idea, embedded in the broad field of rural development, the aim of this study was to find ways for small-scale agri-food producers in the Kazbegi region to adjust their income generating behavior to the ongoing changes in the framework conditions for agricultural production, including taking into consideration the growing number of tourists in the region. More specifically, the aim was to find out how small-scale agri-food producers could benefit from the growth in the tourism sector by marketing their agri-food products to this sector.

To this end, the starting situation with regard to linking agriculture and tourism has been studied. This included the assessment of bottlenecks and opportunities in the agri-food chain, the requirements of the tourism sector for sourcing agri-food products locally, and the question of which products could be suitable for marketing to the tourism sector and how this marketing could be appropriately carried out in order to tap potentials. The results show that a major bottleneck in the agri-food chain is the low agricultural output as well as the lack of processing facilities, e.g. a slaughterhouse, which provide a basis for safe food. On the other hand, the tourism sector often requires a specific, reliable amount of products and adherence to food safety standards, among other things. Nevertheless, due to the high quality of local agri-food products, there is potential demand. Hence, overcoming the above-mentioned hurdles could offer opportunities for small-scale agri-food producers to sell their products.

The suitability of specific products to be marketed to the tourism sector depends on various factors. In general, those products are suitable for marketing to the tourism sector which fulfil the requirements of the service providers. However, although in many cases food safety and the available volume of a product are decisive factors, the requirements of the tourism service providers differ. While some tourism service providers already offer local meat and dairy products which they buy based on trust, others would only be able to do so if official processing facilities were in place. For other products, like e.g. herbs or honey, some entities also require organic production, which is not yet implemented in a certified form. In some cases, only the available output is a restricting factor. This applies for example to potatoes, which are frequently offered and seem to be suitable for marketing to the tourism sector. With the help of

improvements in the efficiency of production, several hurdles could potentially be overcome. Nevertheless, more research on the production efficiency of certain products in relation to the requirements and demand of specific tourism service providers and with regard to investments in processing facilities would be needed for a more thorough answer.

Based on the analysis of the starting situation for linking agriculture and tourism in the Kazbegi region, future perspectives with regard to linking the sectors in the region have been developed. These perspectives were discussed using two scenarios: One best case scenario, where the efficiency of agricultural production in the region can be improved and linkages of both sectors are possible; and one worst case scenario where an increase in agricultural output is not possible and only tourism is existent in the region. The best case scenario depicts a multi-sectoral development, which decreases the risk of dependencies from only one sector, both at the household and at the regional level. In addition, through linkages of agriculture and tourism it offers the small-scale agri-food producers ways to sell their products to the tourism sector and thereby increase their income and improve their livelihoods. Such options include the marketing of agri-food products through cooperative shops or at the farm gate, through contract farming or in the form of food souvenirs, among others. In contrast to that, the worst case scenario depicts a mono-sectoral development with no agricultural production in the long term and heavy dependency on tourism. In particular with regard to political tensions with countries like Russia, such a mono-sectoral development approach is not recommendable. Nevertheless, in order to reach a multi-sectoral development with incentives to work in the agricultural sector, more support for agri-food producers would be needed, for example through consultancy or access to finance.

The study has been embedded in the framework of the theory of cultural lag of William F. Ogburn, which provided a basis for the analysis of changes in the framework conditions for agricultural production and possible adjustments of the income generating behavior of the small-scale agri-food producers. As a methodological approach a qualitative research design has been chosen. Encompassing exploratory interviews and focus group discussions with the local population as well as expert interviews, it allowed an analysis of the topic of interest from various angles. Nevertheless, for more detailed recommendations it would be beneficial to implement an additional quantitative study, including a survey on the demand and supply of agri-food products in the region and also including a quantitative assessment of the potential opportunities for linking agriculture and tourism derived in the course of this study. In addition, the discussion of the results of this study (in particular the potential ways of linking small-scale agri-food producers to the tourism sector) with the local population might add to a bottom-up development of future perspectives for the Kazbegi region.

8 Zusammenfassung

Nach dem Zerfall der Sowjetunion haben sich die Rahmenbedingungen für die landwirtschaftliche Produktion in den postsowjetischen Staaten erheblich verändert, insbesondere durch eine Abkehr von der großflächigen landwirtschaftlichen Produktion. Dies gilt auch für die Region Kazbegi im Großen Kaukasus in Georgien. Während die Aktivitäten zur Einkommenserzielung in der Region früher an die Rahmenbedingungen für die landwirtschaftliche Produktion angepasst waren, trifft dies in den letzten Jahren weniger zu (z. B. da Weideflächen in Russland und eine kostenlose Bereitstellung von Gas für den Anbau von Gemüse in Gewächshäusern nicht mehr zur Verfügung stehen). Dies spiegelt sich unter anderem darin wider, dass die meisten Landwirte in der Region hauptsächlich für den Eigenbedarf produzieren und folglich nur geringe Einkommen erzielen. Aufgrund der attraktiven Berglandschaft ist in der Region Kazbegi im Laufe der letzten Jahre aber auch der Tourismus stark gewachsen.

Das Vorhandensein von Landwirtschaft und Tourismus in der Region könnte Potenziale bieten, beide Sektoren miteinander zu verbinden und so die sozioökonomische Situation der Kleinbauern zu verbessern. Ausgehend von dieser Idee, die in das breite Feld der ländlichen Entwicklung eingebettet ist, bestand das Ziel dieser Studie darin, Wege zu finden, die es den Kleinbauern in der Region Kazbegi ermöglichen, ihre Aktivitäten zur Einkommenserzielung an die geänderten Rahmenbedingungen für die landwirtschaftliche Produktion anzupassen. Insbesondere wurde untersucht, wie Kleinbauern durch die Vermarktung ihrer landwirtschaftlichen Produkte an Touristen und touristische Dienstleister vom Wachstum des Tourismussektors profitieren könnten.

Zu diesem Zweck wurde zunächst die Ausgangssituation in Bezug auf die potenzielle Verknüpfung von Landwirtschaft und Tourismus untersucht. Dies umfasste die Analyse von Engpässen und Chancen in der Produktions- und Dienstleistungskette regionaler Lebensmittel sowie die Erfassung der Anforderungen des Tourismussektors im Hinblick auf den Bezug von Lebensmitteln aus der Region. Zudem wurde untersucht, welche Produkte aus der Region für die Vermarktung im Tourismussektor geeignet sein könnten und welche Formen der Vermarktung sich möglicherweise zur Einkommenserzielung eignen. Die Ergebnisse zeigen, dass Engpässe in der Produktions- und Dienstleistungskette regionaler Lebensmittel hauptsächlich auf die geringen landwirtschaftlichen Erträge zurückzuführen sind. Darüber hinaus herrscht ein Mangel an Verarbeitungsanlagen; so gibt es in der Region beispielsweise keinen Schlachthof, was auch ein wichtiger Faktor für die Lebensmittelsicherheit wäre. Der Tourismussektor benötigt jedoch oft höhere Mengen der Produkte als die aktuell vorhandenen Mengen; zudem wird die Einhaltung von Lebensmittelsicherheitsstandards gefordert. Aufgrund der hohen Qualität regionaler landwirtschaftlicher Erzeugnisse besteht jedoch eine potenzielle Nachfrage von Seiten der touristischen Dienstleister. Die Überwindung der oben genannten Hürden und Engpässe könnte den landwirtschaftlichen Akteuren in der Region Kazbegi daher die Möglichkeit bieten, ihre Produkte gewinnbringend an Touristen und touristische Dienstleister zu vermarkten.

Die Eignung regionaler Produkte zur Vermarktung an den Tourismussektor hängt von verschiedenen Faktoren ab. Allgemein gefasst sind diejenigen Produkte für die Vermarktung geeignet, die die Anforderungen der touristischen Dienstleister und der Touristen in der Region Kazbegi erfüllen. In den meisten Fällen sind die Lebensmittelsicherheit und die verfügbare Menge eines Produkts entscheidende Faktoren für den Kauf eines Produkts aus der Region. Dennoch unterscheiden sich die Anforderungen der Dienstleister des Tourismussektors. Einige touristische Dienstleister beziehen regionale Fleisch- und Milchprodukte von Produzenten, denen sie vertrauen. Andere Vertreter des Tourismussektors würden nur dann regionale Milch- oder Fleischprodukte anbieten, wenn professionelle Verarbeitungsanlagen, wie z.B. ein Schlachthof, in der Region vorhanden wären. Für Kräuter oder Honig aus der Region fordern einige potenzielle Abnehmer eine ökologische Herstellung. Dies wird in der Region jedoch noch nicht in zertifizierter Form umgesetzt. Bei einigen Produkten ist aber auch nur die verfügbare Menge ein beschränkender Faktor der Vermarktung. Dies gilt zum Beispiel für Kartoffeln, die in den Hotels und Gästehäusern der Region bereits häufig angeboten werden. Mit Hilfe einer Steigerung der Produktionseffizienz regionaler Produkte könnten möglicherweise mehrere Hürden in Bezug auf die Verknüpfung von Landwirtschaft und Tourismus überwunden werden. Für eine ausführlichere Antwort wären jedoch weitere Untersuchungen zur möglichen Steigerung der Produktionsmengen nötig. Zudem müssten die Ergebnisse solcher Untersuchungen in Bezug gesetzt werden zu der Nachfrage und den Anforderungen verschiedener Tourismusdienstleister sowie zu den erforderlichen Investitionen in Verarbeitungsbetriebe.

Basierend auf der Analyse der Ausgangssituation wurden Zukunftsperspektiven für die Verknüpfung von Landwirtschaft und Tourismus in der Region Kazbegi entwickelt. Diese Perspektiven wurden anhand von zwei Szenarien diskutiert. Beim Best-Case-Szenario kann die Effizienz der landwirtschaftlichen Produktion in der Region verbessert werden und eine Verknüpfung beider Sektoren ist möglich. Beim Worst-Case-Szenario ist eine Steigerung der landwirtschaftlichen Produktion nicht möglich und in der Region existiert in der langen Frist folglich nur der Tourismussektor. Das Best-Case-Szenario zeigt eine multisektorale Entwicklung auf, die das Risiko der Abhängigkeit von nur einem Sektor sowohl auf Haushalts- als auch auf regionaler Ebene verringert. In diesem Szenario bietet die Verknüpfung von Landwirtschaft und Tourismus den Kleinbauern der Region die Möglichkeit, ihre Produkte an den Tourismussektor zu verkaufen und dadurch zusätzliches Einkommen zu erzielen. Zu den Vermarktungsmöglichkeiten gehört beispielsweise der Verkauf regionaler Produkte über Genossenschaftsläden oder direkt ab Hof, der Verkauf von regionalen Lebensmitteln als Souvenirs oder auch Formen des Vertragsanbaus. Im Gegensatz zum Best-Case-Szenario zeigt das Worst-Case-Szenario in der langen Frist eine monosektorale Entwicklung auf, in der die Landwirtschaft aus der Region verdrängt wird und eine starke Abhängigkeit vom Tourismus besteht. Insbesondere mit Blick auf politische Spannungen mit Ländern wie Russland ist ein solcher monosektoraler Entwicklungsansatz nicht zu empfehlen. Um jedoch eine multisektorale Entwicklung zu erreichen, in der Anreize bestehen, in der Landwirtschaft aktiv zu sein, wäre eine stärkere Unterstützung der Landwirte in der Region erforderlich, beispielsweise durch Beratungsangebote oder den Zugang zu geeigneten Finanzmitteln.

Die Theorie der kulturellen Phasenverschiebung von William F. Ogburn bot den konzeptionellen Rahmen für die Analyse möglicher Anpassungen der Einkommenserzielung von Kleinbauern an die Änderungen der Rahmenbedingungen für die landwirtschaftliche

Produktion. Als methodischer Ansatz wurde ein qualitatives Forschungsdesign gewählt. Anhand von explorativen Interviews und Fokusgruppendiskussionen mit der lokalen Bevölkerung sowie anhand von Interviews mit Experten konnte das Thema aus verschiedenen Blickwinkeln beleuchtet und analysiert werden. Für detaillierte Handlungsempfehlungen wäre es jedoch von Vorteil, zusätzlich eine quantitative Studie durchzuführen, die eine Erhebung der Nachfrage und des Angebots regionaler Produkte sowie eine quantitative Bewertung der potenziellen Verknüpfungsmöglichkeiten von Landwirtschaft und Tourismus umfasst. Darüber hinaus könnte eine gemeinsame Diskussion und Analyse der Studienergebnisse (insbesondere der Möglichkeiten, Kleinbauern mit dem Tourismussektor zu verbinden) mit den Bewohnern der Region zur Bottom-up-Entwicklung von Zukunftsperspektiven für die Region Kazbegi beitragen.

9 References

Abbott, John (1993): Agricultural and food marketing in developing countries. Selected readings. Wallingford: C.A.B. International.

Abbott, John Cave (1997): Marketing improvement in the developing world. What happens and what we have learned. Repr. Rome: Food and agriculture organization of the United Nations (FAO economic and social development series, 37).

Adato, Michelle; Meinzen-Dick, Ruth Suseela (Ed.) (2007): Agricultural research, livelihoods, and poverty. Studies of economic and social impacts in six countries. International Food Policy Research Institute. Baltimore, Md.: Johns Hopkins Univ. Press (International Food Policy Research Institute). Available online at http://www.loc.gov/catdir/enhancements/fy0703/2006025982-b.html.

Ageev, Alexander I.; Gratchev, Mikhail V.; Hisrich, Robert D. (1995): Entrepreneurship in the Soviet Union and Post-Socialist Russia. In: *Small Business Economics* 7 (5), pp. 365–376.

Agency of Protected Areas (2014a): Kazbegi National Park Administration. Available online at http://apa.gov.ge/en/protected-areas/cattestone/yazbegis-erovnuli-parkis-administracia/mariamdjvris-saxelmwifo-nakrdzalis-damatebiti-girsshesanishnaobani, checked on September 12, 2018.

Agency of Protected Areas (2014b): National Park Info. Available online at http://apa.gov.ge/en/protected-areas/national-park, checked on September 13, 2018.

Agency of Protected Areas (2014c): Visitor Statistics by Protected Areas in 2018. Available online at http://apa.gov.ge/en/statistika/vizitorta-statistika/2018-wlis-vizitorta-statistika-daculi-teritoriebis-mixedvit, checked on March 17, 2019.

Akhalkatsi, Maia; Abdaladze, Otar; Nakhutsrishvili, George; Smith, William K. (2006): Facilitation of Seedling Microsites by Rhododendron Caucasicum Extends the Betula Litwinowii Alpine Treeline, Caucasus Mountains, Republic of Georgia. In: *Arctic, Antarctic, and Alpine Research* 38 (4), pp. 481–488. DOI: 10.1657/1523-0430(2006)38[481:FOSMBR]2.0.CO;2.

Anderson, Wineaster (2018): Linkages between tourism and agriculture for inclusive development in Tanzania. In: *Journal of Hospitality and Tourism Insights* 1 (2), pp. 168–184. DOI: 10.1108/JHTI-11-2017-0021.

Arenliu, Arlinda (2015): Linking rural tourism to agriculture. Evidences from comparative case studies in Kosovo, Italy and Spain. With Matteo Vittuari and Samir Sayadi.

Ashley, C.; Carney, D. (1999): Sustainable livelihoods. Lessons from early experience. London: Department for International Development.

Ashley, Caroline; Brine, Peter de; Lehr, Amy; Wilde, Hannah; Rt, O. (2007): The role of the tourism sector in expanding economic opportunity. Corporate social resposibility initiative report No. 23. Kennedy School of Government, Harvard University. Cambridge, MA.

Behrendt, Richard F. (1969): Soziale Strategie für Entwicklungsländer : Entwurf einer Entwicklungssoziologie. Frankfurt/Main: S. Fischer, Welt im Werden.

Bélisle, François J. (1983): Tourism and food production in the Caribbean. In: *Annals of Tourism Research* 10 (4), pp. 497–513. DOI: 10.1016/0160-7383(83)90005-1.

Bélisle, François J. (1984a): Tourism and Food Imports. The Case of Jamaica. In: *Economic Development and Cultural Change* 32 (4), pp. 819–842. DOI: 10.1086/451428.

Bélisle, François J. (1984b): Tourism and Food Imports: The Case of Jamaica. In: *Economic Development and Cultural Change* 32 (4), pp. 819–842.

Bentzen, Nadja (2014): Assoziierungsabkommen EU-Georgien. Europäisches Parlament (Auf einen Blick. Plenum - 5/12/2014), checked on 18.08.2018.

Berelson, Bernard (1952): Content analysis in communication research. Glencoe, IL: Free Press.

Bernard, Harvey Russell; Wutich, Amber; Ryan, Gery Wayne (op. 2017): Analyzing qualitative data. Systematic approaches. 2nd ed. Los Angeles [etc.]: Sage.

Bertelsmann Stiftung (2018): BTI 2018 Country Report - Georgia. Bertelsmann Stiftung. Gütersloh, checked on August 16, 2018.

Bertrand, Alvin L. (Ed.) (1958): Rural sociology. An analysis of contemporary rural life. New York, Toronto, London: McGraw-Hill Book Company, Inc.

Bogner, Alexander; Littig, Beate; Menz, Wolfgang (Ed.) (2014): Interviews mit Experten. Wiesbaden: Springer Fachmedien Wiesbaden.

Bohnsack, Ralf; Marotzki, Winfried; Meuser, Michael (2010): Hauptbegriffe Qualitativer Sozialforschung. 3., durchges. Aufl. Opladen [u.a.], Opladen [u.a.]: Budrich (UTB Erziehungswissenschaft, Sozialwissenschaft, 8226).

Bondyrev, Igor V.; Davitashvili, Zurab V.; Singh, Vijay P. (2015): The Geography of Georgia. Problems and Perspectives. s.l.: Springer-Verlag (World Regional Geography Book Series). Available online at http://ebooks.ciando.com/book/index.cfm/bok_id/1909980.

Bowen, Richard L.; Cox, Linda J.; Fox, Morton (1991): The Interface Between Tourism and Agriculture. In: *The Journal of Tourism Studies* 2 (2), pp. 43–54.

Bradbear, Nicola (2009): Bees and their role in forest livelihoods. A guide to the services provided by bees and the sustainable harvesting, processing and marketing of their products. Rome: Food and agriculture organization of the United Nations.

Brohman, John (1996): New directions in tourism for third world development. In: *Annals of Tourism Research* 23 (1), pp. 48–70. DOI: 10.1016/0160-7383(95)00043-7.

Bundesministerium für wirtschaftliche Zusammenarbeit und Entwicklung (2010-2019): Tourismus – eine Chance für nachhaltige Entwicklung. Available online at http://www.bmz.de/de/themen/nachhaltige_wirtschaftsentwicklung/tourismus/index.html, checked on March 17, 2019.

Caucascert (2019): Green Caucascert Standard. Available online at http://caucascert.ge/files/StandardENG%2310.pdf, last updated on January 30, 2019, checked on April 14, 2019.

Caucasus Business Week (2017): Increased exports and domestic meat products for armed forces. Available online at http://cbw.ge/business/increased-exports-domestic-meat-products-georgian-armed-forces/, last updated on March 6, 2017, checked on March 17, 2019.

Chambers, Robert (1984): Rural development. Putting the last first. 1. publ., repr. London u.a.: Longman.

Chambers, Robert; Conway, Gordon R. (1991): Sustainable rural livelihoods: practical concepts for the 21st century. In: *IDS Discussion Paper* (296). Available online at https://www.ids.ac.uk/files/Dp296.pdf, checked on September 5, 2016.

Chang, Richard C.Y.; Kivela, Jakša; Mak, Athena H.N. (2011): Attributes that influence the evaluation of travel dining experience. When East meets West. In: *Tourism Management* 32 (2), pp. 307–316. DOI: 10.1016/j.tourman.2010.02.009.

Charkviani, N. (2016): Adjara Group to Build an International Airport in Kazbegi and Invest More in Aviation. The Financial.

Chkoidze, Nino (2009): Stateness and Democratisation in Georgia. In: Lorenz King und Giorgi Xubua (Ed.): Georgia in transition. Experiences and perspectives. Frankfurt am Main: Lang (Schriften zur internationalen Entwicklungs- und Umweltforschung, 26), pp. 59–76.

Choenkwan, Sukanlaya; Promkhambut, Arunee; Hayao, Fukui; Rambo, A. Terry (2016): Does Agrotourism Benefit Mountain Farmers? A Case Study in Phu Ruea District, Northeast Thailand. In: *Mountain Research and Development* 36 (2), pp. 162–172. DOI: 10.1659/MRD-JOURNAL-D-15-00111.1.

Cox, Linda; Fox, Morton; Bowen, Richard L. (1995): Does tourism destroy agriculture? In: *Annals of Tourism Research* 22 (1), pp. 210–213. DOI: 10.1016/0160-7383(95)90069-1.

Cox, Terence M. (1979): Rural sociology in the Soviet Union. Its history and basic concepts. New York: Holmes & Meier Publishers.

Dachmarke Rhön (2015): Übersicht über Zeichen und Marken der Rhön. Available online at https://dmr.marktplatzrhoen.de/markenuebersicht, checked on March 21, 2019.

Dargan, Lorna; Shucksmith, Mark (2008): LEADER and Innovation. In: *Sociologia Ruralis* 48 (3), pp. 274–291. DOI: 10.1111/j.1467-9523.2008.00463.x.

Denzin, Norman K.; Lincoln, Yvonna S. (Ed.) (2011): The Sage handbook of qualitative research. Russell Sage Foundation. 4. ed. Los Angeles, Calif.: Sage. Available online at http://www.beck-shop.de/infoPopup.aspx?product=8428061&tab=3.

Denzin, Norman K.; Lincoln, Yvonna S. (Ed.) (2017): The SAGE handbook of qualitative research. 5th edition. Los Angeles, London, New Delhi, Singapore, Washington DC, Melbourne: Sage.

Deutsche Forstservice GmbH; AGEG Consultants eG (2010a): Feasibility Study for the Ecoregional Programme III (Georgia), Kazbegi project. Annex of the Draft Final Report. Ministry of Environment Protection and Natural Resources (MEPNR); Agency for Protected Areas (APA).

Deutsche Forstservice GmbH; AGEG Consultants eG (2010b): Feasibility Study for the Ecoregional Programme III (Georgia), Kazbegi Project. Final Report. Ministry of Environment Protection and Natural Resources (MEPNR); Agency for Protected Areas (APA). Available online at http://tjs-caucasus.org/wp-content/uploads/2013/09/Final-Rep-Feasibility-Study-Kazbegi-Project.pdf, checked on August 22, 2018.

Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) (2012): Territoriale Entwicklung im ländlichen Raum. Ed. v. Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ). Available online at https://www.giz.de/fachexpertise/downloads/Fachexpertise/2012_giz_Territoriale_Entwicklung_im_laendlichen_Raum_Ansatz(2).pdf, checked on September 22, 2016.

Deutsches Mab-Nationalkomitee (Ed.) (2004): Voller Leben. UNESCO-Biosphärenreservate — Modellregionen für eine Nachhaltige Entwicklung. Berlin: Springer-Verlag.

Didebulidze, Alexander; Urushadze, Tengiz (2009): Agriculture and Land Use Change in Georgia. In: Lorenz King und Giorgi Xubua (Ed.): Georgia in transition. Experiences and perspectives. Frankfurt am Main: Lang (Schriften zur internationalen Entwicklungs- und Umweltforschung, 26), S. 241–264.

Dodman, David; Rhiney, Kevon (2008): 'We Nyammin?' Food Supply, Authenticity and the Tourist Experience in Negril, Jamaica. In: *New Perspectives in Caribbean Tourism. DOI:* 10.4324/9780203931271.

Dresing, Thorsten; Pehl, Thorsten; Schmieder, Christian (2015): Manual (on) Transcription. Transcription Conventions, Software Guides and Practical Hints for Qualitative Researcher. Marburg. Available online at http://www.audiotranskription.de/download/manual_on_transcription.pdf, September 26, 2016.

Duncan, Otis Dudley (Ed.) (1964): On culture and social change. Selected papers. First Phoenix Edition. Chicago, London: The University of Chicago Press (Phoenix books).

Ebanoidze, Jaba (2003): Current Land Policy Issues in Georgia. Food and Agriculture Organization. Available online at http://www.fao.org/docrep/006/y5026e/y5026e09.htm.

Elkana (2016): Important Events/ Novelties. Available online at http://www.elkana.org.ge/uploads/publication/39/file_eng.pdf, checked on December 12, 2019.

Elliott, Robert; Fischer, Constance T.; Rennie, David L. (1999): Evolving guidelines for publication of qualitative research studies in psychology and related fields. In: *British Journal of Clinical Psychology* 38 (3), pp. 215–229. DOI: 10.1348/014466599162782.

Ellis, Frank; Biggs, Stephen (2001): Evolving Themes in Rural Development 1950s-2000s. In: *Development Policy Review* 19 (4), pp. 437–448. DOI: 10.1111/1467-7679.00143.

Elwert, Georg (1985): Überlebensökonomien und Verflechtungsanalyse. In: *Zeitschrift für Wirtschaftsgeographie* 29 (1). DOI: 10.1515/zfw.1985.0006.

ENPARD Georgia 2018 (2018): What is ENPARD? Available online at http://enpard.ge/en/about-us/, checked on September 13, 2018.

Erkomaishvili, Gulnaz; Kharaishvili, Eteri; Gvelesiani, Revaz; Chavleishvili, Marina (2014): Policy of Tourism and Opportunities of Development of Wellness Industry in Georgia. In: *International Journal of Economics and Management Engineering* 8 (1).

Erskine, R. J.; Martinez, R. O.; Contreras, G. A. (2015): Cultural lag. A new challenge for mastitis control on dairy farms in the United States. In: *Journal of dairy science* 98 (11), pp. 8240–8244. DOI: 10.3168/jds.2015-9386.

EUROPARC Deutschland e.V. (2007): UNESCO-Biosphärenreservate. Modellregionen von Weltrang. Berlin.

European Commission (2006): The Leader approach. A basic guide. Luxembourg: Publications Office (Fact sheet / Directorate-General for Agriculture).

European Network for Rural Development (2012): Local Food and Short Supply Chains. In: *EU Rural Review* 12.

Evan, William M. (2004): Voting Technology, Political Institutions, Legal Institutions and Civil Society. A Study of the Hypothesis of Cultural Lag in Reverse. In: *History and Technology* 20 (2), pp. 165–183. DOI: 10.1080/0734151042000240809.

Evers, H. D. (1988): Subsistenzproduktion, Markt und Staat - Der sog. Bielefelder Verflechtungsansatz. In: G. Leng und W. Taubmann (Ed.): Geographische Entwicklungsforschung im interdisziplinären Dialog. Bremen, pp. 131–143.

Flick, Uwe (Ed.) (2008): Qualitative Forschung. Ein Handbuch. 6., durchges. u. aktualisierte Aufl. Reinbek bei Hamburg: Rowohlt (Rowohlts Enzyklopädie, 55628).

Flick, Uwe (2009): An introduction to qualitative research. 4. ed., rev., expanded and updated. Los Angeles, Calif.: Sage.

Frisvoll, Svein; Forbord, Magnar; Blekesaune, Arild (2015): An Empirical Investigation of Tourists' Consumption of Local Food in Rural Tourism. In: *Scandinavian Journal of Hospitality and Tourism* 16 (1), pp. 76–93. DOI: 10.1080/15022250.2015.1066918.

Galt, Ryan E. (2013): The Moral Economy Is a Double-edged Sword. Explaining Farmers' Earnings and Self-exploitation in Community-Supported Agriculture. In: *Economic Geography* 89 (4), pp. 341–365. DOI: 10.1111/ecge.12015.

Georgian National Tourism Administration (2016): Georgian Tourism in Figures 2015. Structure and Industry Data. Tbilisi. Available online at http://gnta.ge/wp-content/uploads/2016/06/2015-eng.pdf., checked on March 17, 2019.

Georgian National Tourism Administration (2017): International Visitor Survey 2017. Tbilisi. Available online at https://gnta.ge/statistics/, checked on March 17, 2019.

Georgian National Tourism Administration (2018a): Domestic Travel by Georgian Residents. January - December 2017. Tbilisi.

Georgian National Tourism Administration (2018b): Georgian Tourism in Figures 2017. Structure and Industry Data. Tbilisi. Available online at https://gnta.ge/statistics/; checked on March 17, 2019.

GeoWel Research (2015a): Agriculture potential assessment of Kazbegi municipality. Available online at http://pin.ge/plugins_images/opportunities/kazbegi_agricultural_assessment_eng.pdf, checked on September 5, 2016.

GeoWel Research (2015b): Tourism Sector in Kazbegi Municipality. Current challenges and potential for development. Available online at http://pin.ge/plugins_images/opportunities/kazbegilag_pin_tourism_reportengsummer2015.pdf, checked on Mai 10, 2017.

GeoWel Research (2016): The Overview of Kazbegi General Development Potential. Baseline study.

Glaser, Barney G.; Strauss, Anselm Leonard (1967): The discovery of grounded theory. Strategies for qualitative research. New York: Aldine.

Gläser, Jochen; Laudel, Grit (2010): Experteninterviews und qualitative Inhaltsanalyse als Instrumente rekonstruierender Untersuchungen. 4. Auflage. Wiesbaden: VS Verlag (Lehrbuch).

Gogodze, Joseph; Kan, Iddo; Kimhi, Ayal (2007): Land Reform and Rural Well Being in the Republic of Georgia: 1996-2003. Hebrew University of Jerusalem (Discussion Paper, 1.07).

Goodwin, George (1993): An examination of Linkages between turism and the agriculture and manufacturing sectors in the OECS. St. Johns (OECS publications).

Gössling, Stefan; Garrod, Brian; Aall, Carlo; Hille, John; Peeters, Paul (2011): Food management in tourism. Reducing tourism's carbon 'foodprint'. In: *Tourism Management* 32 (3), pp. 534–543. DOI: 10.1016/j.tourman.2010.04.006.

Granovetter, Mark (1985): Economic Action and Social Structure. The Problem of Embeddedness. In: *American Journal of Sociology* 91 (3), pp. 481–510. DOI: 10.1086/228311.

Greenwood, Davydd J. (1972): Tourism as an Agent of Change. A Spanish Basque Case. In: *Ethnology* 11 (1), pp. 80. DOI: 10.2307/3773161.

Gudauri Travel (2018): Gudauri and Kobi Ski Lifts scheme (Georgia). Gudauri and Kazbegi ski areas scheme, ski trails and ski-lifts. Available online at https://gudauri.travel/en/karta-trass-gudauri.html, last updated on July 13, 2018, checked on March 18, 2019.

Gudeman, Stephen (1978): The demise of a rural economy. From subsistence to capitalism in a Latin American village. London, Henley, Boston: Routledge & Kegan Paul (International library of anthropology).

Gugushvili, Temur; Salukvadze, Gvantsa (2015): Formation of tourism services through Georgian culture. Example of Kazbegi Municipality. In: *Journal of Tourism Theory and Research* 1 (1), p. 68. DOI: 10.24288/jttr.202822.

Gugushvili, Temur; Salukvadze, Gvantsa; Salukvadze, Joseph (2017): Fragmented development. Tourism-driven economic changes in Kazbegi, Georgia. In: *Annals of Agrarian Science. DOI:* 10.1016/j.aasci.2017.02.005.

Harrison, Phillipa Anne.; Maharaj, Brij. (2013): Tourism impacts on subsistence agriculture. A case study of the Okavango Delta, Botswana. Available online at http://researchspace.ukzn.ac.za/bitstream/10413/9357/1/Harrison_Philippa_2013.pdf.

Heiny, Jennifer (2018): Socio-economic conditions of rural Georgian households and their behavioral intentions regarding tourism development. An empirical analysis. Available online at http://nbn-resolving.de/urn:nbn:de:hebis:26-opus-136071.

Heiny, Jennifer; Mamniashvili, Giorgi; Leonhaeuser, Ingrid-Ute (2017): The socioeconomic situation of private households in the Kazbegi region – First insights based on quantitative data. In: *Annals of Agrarian Science* 15 (1), pp. 31–39. DOI: 10.1016/j.aasci.2017.02.003.

Helfferich, Cornelia (2009): Die Qualität qualitativer Daten. Manual für die Durchführung qualitativer Interviews. 3., überarb. Aufl. Wiesbaden: VS Verl. für Sozialwiss (Lehrbuch). Available online at http://deposit.d-nb.de/cgi-bin/dokserv?id=3000242&prov=M&dok_var=1&dok_ext=htm.

Henderson, Joan C. (2009): Food tourism reviewed. In: *British Food Journal* 111 (4), pp. 317–326. DOI: 10.1108/00070700910951470.

Hermans, Dymphna (1981): The encounter of agriculture and tourism a catalan case. In: *Annals of Tourism Research* 8 (3), pp. 462–479. DOI: 10.1016/0160-7383(81)90009-8.

Heywood, Vernon (1999): Use and potential of wild plants in farm households. Rome: Food and agriculture organization of the United Nations (FAO farm systems management series, 15).

Hoffmann-Riem, Christa (1980): Die Sozialforschung einer interpretativen Soziologie. Der Datengewinn. In: *Kölner Zeitschrift für Soziologie und Sozialpsychologie* 32, pp. 339–372.

Hüller, S.; Heiny, J.; Leonhäuser, I.-U. (2017): Linking agricultural food production and rural tourism in the Kazbegi district – A qualitative study. In: *Annals of Agrarian Science* 15 (1), pp. 40–48. DOI: 10.1016/j.aasci.2017.02.004.

International Labour Organization (1996-2014): Law of Georgia on the development of high mountainous regions. Available online at https://www.ilo.org/dyn/natlex/docs/ELECTRONIC/104537/127659/F1097580316/4036%20eng.pdf, checked on March 17, 2019.

Jarquin Sanchez, Natalia Helena; Velazuez Cigarroa, Erasmo; Castellanos Suarez, José Alfredo (2017): Main challenges of rural development strategies through tourism and agriculture linkages in Mexico. In: *Agriculture and Forestry* 63 (4). DOI: 10.17707/AgricultForest.63.4.10.

Junge, S. K.; Ingram, R.; Veerkamp, G. E.; Blake; B. (1995): Community supported agriculture... making the connection: A 1995 handbook for producers. Aubern and Davis: University of California Cooperative Extension Placer County and Small Farm Center, University of California.

Kaplinsky, R. (2000): Globalisation and Unequalisation. What Can Be Learned from Value Chain Analysis? In: *Journal of Development Studies* 37 (2), pp. 117–146. DOI: 10.1080/713600071.

KäseStrasse (2018): Die Käsestrasse. Eine besondere Vielfalt. Available online at https://www.kaesestrasse.at/erleben-entdecken/die-kaesestrasse/eine-besondere-vielfalt, checked on September 24, 2018.

Kegel, Hannah (2003): The significance of subsistence farming in Georgia as an economic and social buffer. In: *Studies on the Agricultural and Food Sector in Central and Eastern Europe. Subsistence agricutlure in Central and Europe: How to Break the Vicicous Circle?* Available online at http://www.iamo.de/fileadmin/documents/sr_vol22.pdf, checked on September 19, 2016.

Khardzeishvili, S. (2009): Ecotourism in Georgia. In: *Journal of Environmental Protection and Ecology* 10 (2), pp. 513–523.

Khomeriki, Giorgi (2015): Resources and Threats of the Eco-Tourism Development in Georgia. In: *AJEP* 4 (3), p. 180. DOI: 10.11648/j.ajep.s.2015040301.38.

Knaus, Florian; Bonnelame, Lea Ketterer; Siegrist, Dominik (2017): The Economic Impact of Labeled Regional Products. The Experience of the UNESCO Biosphere Reserve Entlebuch. In: *Mountain Research and Development* 37 (1), pp. 121–130. DOI: 10.1659/MRD-JOURNAL-D-16-00067.1.

Knickel, Karlheinz (2001): The marketing of Rhöngold milk. An example of the reconfiguration of natural relations with agricultural production and consumption. In: *Journal of Environmental Policy & Planning* 3 (2), pp. 123–136. DOI: 10.1002/jepp.79.

Kohls, Richard L.; Uhl, Joseph N. (1998): Marketing of agricultural products. 8th ed. Upper Saddle River, NJ: Prentice Hall.

Kötschau, Kerstin; Sepashvili, Eka; Narimanidze, Nino (2009): Agriculture in Georgia : commercial sector or social safety net? In: Lorenz King and Giorgi Xubua (Ed.): Georgia in transition. Experiences and perspectives. Frankfurt am Main: Lang (Schriften zur internationalen Entwicklungs- und Umweltforschung, 26), pp. 221–240.

Kracauer, Siegfried (1952): The Challenge of Qualitative Content Analysis. In: *Public Opinion Quarterly* 16 (4, Special Issue on International Communications Research), p. 631. DOI: 10.1086/266427.

Kraus, Felix (2015): Nachhaltige Regionalentwicklung im Biosphärenreservat Rhön. Regionale Wertschöpfungsketten diskutiert am Beispiel der Dachmarke Rhön. Würzburg: Würzburg University Press (Würzburger geographische Arbeiten, Band 114).

Kraus, Felix; Merlin, Cornelius; Job, Hubert (2014): Biosphere reserves and their contribution to sustainable development. In: *Zeitschrift für Wirtschaftsgeographie* 58 (1), p. 265. DOI: 10.1515/zfw.2014.0011.

Krueger, Richard (2002): Designing and conducting focus group interviews. Available online at https://www.eiu.edu/ihec/Krueger-FocusGroupInterviews.pdf, checked on March 18, 2019.

Kruse, Jan (2015): Qualitative Interviewforschung. Ein integrativer Ansatz. 2., überarbeitete und ergänzte Auflage. Weinheim und Basel: Beltz Juventa (Grundlagentexte Methoden).

Kruse, Jan; Bethmann, Stephanie; Niermann, Debora; Schmieder, Christian (Ed.) (2012): Qualitative Interviewforschung in und mit fremden Sprachen. Eine Einführung in Theorie und Praxis. Weinheim: Beltz Juventa.

Kuckartz, Udo (2007): Qualitative Evaluation. Der Einstieg in die Praxis. Wiesbaden: VS Verlag für Sozialwissenschaften | GWV Fachverlage GmbH Wiesbaden. Available online at http://dx.doi.org/10.1007/978-3-531-90546-4.

Kuckartz, Udo (2009): Evaluation online. Internetgestützte Befragung in der Praxis. 1. Aufl. Wiesbaden: VS Verl. für Sozialwiss (Lehrbuch).

Kuckartz, Udo (2010): Einführung in die computergestützte Analyse qualitativer Daten. 3., aktualisierte Aufl. Wiesbaden: VS Verl. für Sozialwiss (Lehrbuch).

Kuckartz, Udo (2014a): Qualitative Inhaltsanalyse. Methoden, Praxis, Computerunterstützung. 2., durchgesehene Auflage. Weinheim, Basel: Beltz Juventa (Grundlagentexte Methoden).

Kuckartz, Udo (2014b): Qualitative text analysis. A guide to methods, practice & using software. London u.a.: Sage.

Kühn, Thomas; Koschel, Kay-Volker (2011): Gruppendiskussionen. Ein Praxis-Handbuch. 1. Aufl. Wiesbaden: VS Verlag für Sozialwissenschaften / Springer Fachmedien Wiesbaden GmbH Wiesbaden. Available online at http://dx.doi.org/10.1007/978-3-531-93243-9.

Kuhnert, Heike (1998): Direktvermarktung in konventionell und ökologisch wirtschaftenden Betrieben. Eine Untersuchung zur Direktvermarktung als eine Form der einzelbetrieblichen Diversifikation in der Landwirtschaft. Zugl.: Kassel, Gesamthochsch., Diss., 1997. Kiel: Wiss.-Verl. Vauk (Marketing der Agrar- und Ernährungswirtschaft, 15).

Lacher, R. Geoffrey; Nepal, Sanjay K. (2010): From Leakages to Linkages. Local-Level Strategies for Capturing Tourism Revenue in Northern Thailand. In: *Tourism Geographies* 12 (1), pp. 77–99. DOI: 10.1080/14616680903493654.

Lamnek, Siegfried (2005): Gruppendiskussion. Theorie und Praxis. 2., überarb. und erw. Aufl. Weinheim: Beltz (UTB Psychologie, Pädagogik, Soziologie, 8303). Available online at http://www.socialnet.de/rezensionen/isbn.php?isbn=978-3-8252-8303-2.

Lamnek, Siegfried (2016): Qualitative Sozialforschung. Mit Online-Materialien. 6., vollständig überarbeitete Aufl. Weinheim: Beltz (Ciando library).

LANDMARKT (2019): Herzlich Wilkommen. Available online at https://landmarkt.hessische-direktvermarkter.de/node, checked on March 18, 2019.

Lerman, Zvi (1999): Land Reform and Farm Restructuring. What Has Been Accomplished to Date? In: *The American Economic Review* 89 (2), pp. 271–275.

Lerman, Zvi (2005): Farm Fragmentation and Productivity. Evidence from Georgia. Hebrew University of Jerusalem (Discussion Paper No. 8.05).

Lerman, Zvi (2006): The Impact of Land Reform on Rural Household Incomes in Transcaucasia. In: *Eurasian Geography and Economics* 47 (1), pp. 112–123. DOI: 10.2747/1538-7216.47.1.112.

Lin, Lin; Mao, Pei-Chuan (2015): Food for memories and culture – A content analysis study of food specialties and souvenirs. In: *Journal of Hospitality and Tourism Management* 22, pp. 19–29. DOI: 10.1016/j.jhtm.2014.12.001.

Liñán, Francisco; Santos, Francisco Javier (2007): Does Social Capital Affect Entrepreneurial Intentions? In: *International Advances in Economic Research* 13 (4), pp. 443–453. DOI: 10.1007/s11294-007-9109-8.

Littmann; Udo (1998): Entwicklung möglicher Zukunftsbilder für die Universität Kaiserslautern mit Hilfe der Szenario-Technik. In: *Arbeitspapiere zu Hochschulfragen und Hochschulcontrolling* (10). Available online at https://kluedo.ub.uni-kl.de/frontdoor/deliver/index/docId/961/file/apap_10.pdf, checked on October 24, 2018.

Livny, Eric; Ott, Mack; Torosyan, Karine (2009): Impact of Russian Sanctions on the Georgian Economy. In: Lorenz King und Giorgi Xubua (Ed.): Georgia in transition. Experiences and perspectives. Frankfurt am Main: Lang (Schriften zur internationalen Entwicklungs- und Umweltforschung, 26), pp. 175–193.

Local Action Group Kazbegi (2016): Kazbegi Development Strategy 2016-2020. Local Action Group Kazbegi. Available online at http://pin.ge/plugins_images/opportunities/kazbegi_local_development_strategy_lds_20162020__eng.pdf, checked on September 5, 2016.

Local Action Group Kazbegi (2018): Our Work. Local Action Group Kazbegi. Available online at http://www.kazbegilag.ge/en/ourwork, checked on September 13, 2018.

Lopolito, Antonio; Sisto, Roberta; Barbuto, Angela; Da Re, Riccardo (2015): What is the impact of LEADER on the local social resources? Some insights on Local Action Group's aggregative role. In: *Italian Review of Agricultural Economics* 70 (1), 55.75. DOI: 10.13128/REA-16977.

Lundgren, J.O.J. (1975): Tourist impact/Island entrepreneurship in the Caribbean. In: *Publication Series (Conference of Latin Americanist Geographers)* 4, pp. 12–19.

Magiera, Anja; Feilhauer, Hannes; Tephnadze, Nato; Waldhardt, Rainer; Otte, Annette; Rocchini, Duccio (2016): Separating reflectance signatures of shrub species - a case study in the Central Greater Caucasus. In: *Appl Veg Sci* 19 (2), S. 304–315. DOI: 10.1111/avsc.12205.

Mak, Athena H.N.; Lumbers, Margaret; Eves, Anita (2012): Globalisation and food consumption in tourism. In: *Annals of Tourism Research* 39 (1), pp. 171–196. DOI: 10.1016/j.annals.2011.05.010.

Mamniashvili, Giorgi (2018): Sustainable tourism development in mountainous regions of Georgia - Bakuriani and Kazbegi case study. Justus-Liebig-Universität, Otto-Behaghel-Str. 8, 35394 Gießen. Available online at http://geb.uni-giessen.de/geb/volltexte/2019/14213.

Mao, Nara; Grunfeld, Helena; DeLacy, Terry; Chandler, David (2014): Agriculture and tourism linkage constraints in the Siem Reap-Angkor region of Cambodia. In: *Tourism Geographies* 16 (4), pp. 669–686. DOI: 10.1080/14616688.2014.915878.

Margarian, Anne (2013): A Constructive Critique of the Endogenous Development Approach in the European Support of Rural Areas. In: *Growth Change* 44 (1), pp. 1–29. DOI: 10.1111/grow.12000.

Marsden, Terry; Banks, Jo; Bristow, Gillian (2000): Food Supply Chain Approaches. Exploring their Role in Rural Development. In: *Sociologia Ruralis* 40 (4), pp. 424–438. DOI: 10.1111/1467-9523.00158.

Mayr-Birklbauer, Valerie (2009): Frauen und Biertrinken. In: Renate Buber und Hartmut H. Holzmüller (Ed.): Qualitative Marktforschung: Konzepte – Methoden – Analysen. Wiesbaden: Gabler, pp. 805–821.

Mayring, Philipp (2000): Qualitative Content Analysis. Forum Qualitative Sozialforschung / Forum: Qualitative Social Research, Vol 1, No 2 (2000): Qualitative Methods in Various Disciplines I: Psychology. DOI: 10.17169/FQS-1.2.1089.

Mayring, Philipp (2010): Qualitative Inhaltsanalyse. Grundlagen und Techniken. 11., aktualisierte und überarb. Aufl. Weinheim u.a.: Beltz (Pädagogik).

Mayring, Philipp (2015a): Qualitative Content Analysis. Theoretical Background and Procedures. In: Angelika Bikner-Ahsbahs, Christine Knipping und Norma Presmeg (Ed.): Approaches to Qualitative Research in Mathematics Education: Examples of Methodology and Methods. Dordrecht: Springer Netherlands, pp. 365–380. Available online at https://doi.org/10.1007/978-94-017-9181-6_13.

Mayring, Philipp (2015b): Qualitative Inhaltsanalyse. Grundlagen und Techniken. 12., überarb. Aufl. Weinheim: Beltz (Beltz Pädagogik). Available online at http://content-select.com/index.php?id=bib_view&ean=9783407293930.

Meler, Marcel; Cerovic, Zdenko (2003): Food marketing in the function of tourist product development. In: *British Food Journal* 105 (3), pp. 175–192. DOI: 10.1108/00070700310477121.

Mey, Günter; Mruck, Katja (2011): Grounded-Theory-Methodologie. Entwicklung, Stand, Perspektiven. In: Günter Mey und Katja Mruck (Ed.): Grounded Theory Reader. Wiesbaden: VS Verlag für Sozialwissenschaften, pp. 11–48.

Meyer, Dorothea (2006): Caribbean tourism, local sourcing and enterprise development. In: *Pro-poor tourism partnership Working Paper Series* 18, pp. 1–72.

Michaud, Jean (1991): A social anthropology of tourism in Ladakh, India. In: *Annals of Tourism Research* 18 (4), pp. 605–621. DOI: 10.1016/0160-7383(91)90077-O.

Ministry of Agriculture of Georgia (2015): Strategy for agricultural development in Georgia 2015-2020. Available online at http://extwprlegs1.fao.org/docs/pdf/geo145265.pdf.

Ministry of Agriculture of Georgia (2016): Beehives have been delivered to cooperatives in Lentekhi, Tsageri and Oni Municipalities. Available online at http://www.moa.gov.ge/En/News/1069, last updated on March 6, 2016, checked on March 18, 2019.

Ministry of Agriculture of Georgia (2017): Rural Development Strategy of Georgia. Available online at http://enpard.ge/en/wp-content/uploads/2015/05/Rural-Development-Strategy-of-Georgia-2017-2020.pdf, checked on March 18, 2019.

Mitchell, Jonathan; Ashley, Caroline (2010): Tourism and poverty reduction. Pathways to prosperity. London, Sterling, Va: Earthscan (Tourism, Environment and Development). Available online at http://site.ebrary.com/lib/alltitles/docDetail.action?docID=10364907.

MoreSleep (2018a): Activities Kazbegi. Available online at https://roomshotels.com/activities-kazbegi/, checked on September 14, 2018.

MoreSleep (2018b): Aviator Helicopters. Available online at https://roomshotels.com/aviator/, checked on September 14, 2018.

Morgan, David L. (1997): Focus groups as qualitative research. 2. ed. Thousand Oaks, Calif.: Sage Publ (Qualitative research methods series, 16). Available online at http://www.loc.gov/catdir/enhancements/fy0655/96025389-d.html.

Muckel, Petra (2011): Die Entwicklung von Kategorien mit der Methode der Grounded Theory. In: Günter Mey und Katja Mruck (Ed.): Grounded Theory Reader. Wiesbaden: VS Verlag für Sozialwissenschaften, pp. 333–352. Available online at https://doi.org/10.1007/978-3-531-93318-4_15.

National Statistics Office of Georgia (Geostat) (2015): Agriculture of Georgia 2014. Tbilisi, checked on August 16, 2018.

National Statistics Office of Georgia (Geostat) (2016): 2014 General Population Census. Main Results. Tbilisi, checked on August 16, 2018.

National Statistics Office of Georgia (Geostat) (2018a): Employment and Unemployment. Available online at http://www.geostat.ge/index.php?action=page&p_id=146&lang=eng., checked on March 18, 2019.

National Statistics Office of Georgia (Geostat) (2018b): Population. Available online at http://www.geostat.ge/index.php?action=page&p_id=152&lang=eng., checked on March 18, 2019.

National Statistics Office of Georgia (Geostat) (2019): Distribution of Average Monthly Incomes per Household by Urban and Rural Areas. Available online at http://www.geostat.ge/cms/site_images/_files/english/households/Distribution%20of%20average%20monthly%20incomes%20per%20household%20by%20urban%20and%20rural%20areas.xls, checked on March 18, 2019.

Natsvlishvili, Ia (2015): Social attitudes towards entrepreneurship and women's entrepreneurial activity in the context of post-soviet developing countries (evidence from Georgia). In: *International Journal of Arts & Sciences* 8 (8), pp. 529–540.

New Economic Opportunities Initiative (2011): New Economic Opportunities Initiative - Home. Available online at http://georgianeo.ge/index.php, checked on September 13, 2018.

Nienhuysen, Frank (2018): Land in der Warteschleife. In: *Süddeutsche Zeitung*, 08.08.2018. Available online at https://www.sueddeutsche.de/politik/georgien-land-der-zaeune-und-graeben-1.4084557, checked on August 18, 2018.

Nugraha, Daniel Setiawan (2010): Extending the concept of value chain governance. an institutional perspective ; comparative case studies from dairy value chains in Indonesia. Available online at http://edoc.hu-berlin.de/docviews/abstract.php?lang=ger&id=37253http://nbn-resolving.de/urn:nbn:de:kobv:11-100177054http://d-nb.info/1010453203/34http://edoc.hu-berlin.de/dissertationen/nugraha-daniel-setiawan-2010-08-27/PDF/nugraha.pdf.

OECD (2001a): Glossary of statistical terms. Household. Available online at https://stats.oecd.org/glossary/detail.asp?ID=1255.

OECD (2001b): Glossary of statistical terms. Small-scale producers. Available online at https://stats.oecd.org/glossary/detail.asp?ID=2472, last updated on November 22, 2001, checked on March 18, 2019.

OECD (2006a): Reinventing Rural Policy. OECD. Paris (Policy Brief).

OECD (2006b): The new rural paradigm. Policies and governance. Paris: OECD (OECD rural policy reviews). Available online at http://dx.doi.org/10.1787/9789264023918-en.

OECD (2016): A New Rural Development Paradigm for the 21st Century: OECD Publishing.

OECD (2019): DAC List of ODA Recipients. Effective for reporting on 2018, 2019 and 2020 flows. Available online at http://www.oecd.org/dac/financing-sustainable-development/development-finance-standards/DAC_List_ODA_Recipients2018to2020_flows_En.pdf, checked on March 18, 2019.

Ogburn, W. F. (1922): Social Change with Respect to Culture and Original Nature: B.W. Huebsch, Incorporated. Available online at https://archive.org/details/socialchangewith00ogburich; https://books.google.de/books?id=tTlFAAAAIAAJ.

Ogburn, William Fielding (1964): Cultural Lag as Theory. 1957. In: Otis Dudley Duncan (Ed.): On culture and social change. Selected papers. First Phoenix Edition. Chicago, London: The University of Chicago Press (Phoenix books), pp. 86–98.

Oxford University Press (2019): English Oxford Living Dictionaries. Definition of vision in English. Available online at https://en.oxforddictionaries.com/definition/vision, checked on March 17, 2019.

Peterson, Garry D.; Cumming, Graeme S.; Carpenter, Stephen R. (2003): Scenario Planning. A Tool for Conservation in an Uncertain World. In: *Conservation Biology* 17 (2), pp. 358–366. DOI: 10.1046/j.1523-1739.2003.01491.x.

Pillay, Manisha; Rogerson, Christian M. (2013): Agriculture-tourism linkages and pro-poor impacts. The accommodation sector of urban coastal KwaZulu-Natal, South Africa. In: *Applied Geography* 36, pp. 49–58. DOI: 10.1016/j.apgeog.2012.06.005.

Podoba, Juraj (2003): Cultural Lag as a Determinant of Social Conflicts of the Transformation Period. In: *Anthropological Journal on European Cultures* 12, pp. 157–185.

Rauch, Theo (2009): Entwicklungspolitik. Theorien, Strategien, Instrumente. Dr. A 1. Braunschweig: Westermann (Das geographische Seminar).

Rauch, Theo; Bartels, Matthias; Engel, Albert (2001): Regional Rural Development. A regional response to rural poverty. In: *Schriftenreihe der GTZ Regional Rural Development* (274). Available online at https://docs.google.com/viewerng/viewer?url=http://info.mrcmekong.org/assets/midocs/0001529-society-regional-rural-developmenta-regional-response-to-rural-poverty.pdf, checked on September 5, 2016.

Ray, Christopher (2000): Editorial. The eu leader Programme. Rural Development Laboratory. In: *Sociologia Ruralis* 40 (2), pp. 163–171. DOI: 10.1111/1467-9523.00138.

Reibnitz, Ute von (1987): Szenarien - Optionen für die Zukunft. Hamburg: McGraw-Hill.

Renting, Henk; Marsden, Terry K.; Banks, Jo (2003): Understanding Alternative Food Networks. Exploring the Role of Short Food Supply Chains in Rural Development. In: *Environ Plan A* 35 (3), pp. 393–411. DOI: 10.1068/a3510.

Reynolds, Nikolai (2010): Factors influencing business relationships in agri-food chains. An analysis of selected German chains in European comparison. Univ., Diss.--Bonn, 2010. 1. Aufl. Lohmar: Eul.

Robinson, Richard; Keenan, Laura (2010): The Rhön Biosphere Reserve: Developing New Marketing Strategies to Conserve a Traditional Agricultural Landscape. In: *Mountain Forum Bulletin* X (1).

Rogerson, Christian M. (2012): Tourism–agriculture linkages in rural South Africa. Evidence from the accommodation sector. In: *Journal of Sustainable Tourism* 20 (3), pp. 477–495. DOI: 10.1080/09669582.2011.617825.

Romeo, Giuseppa; Marcianò, Claudio (2014): Governance Assessment of the Leader Approach in Calabria Using an Integrated AHP-Fuzzy TOPSIS Methodology. In: *AEF* 11, pp. 566–572. DOI: 10.4028/www.scientific.net/AEF.11.566.

Salukvadze, Joseph (2008): Good Governance and Natural Resources Tenure in Eastern Europe and CIS Region. Food and Agriculture Organization of the United Nations (FAO). Land Tenure Working Paper, 3. Tbilisi.

Schanderl, Michael (1993): Vermarktungskonzeptionen für Produkte des ökologischen Landbaus unter besonderer Berücksichtigung des Franchise-Systems. Techn. Univ., Diss.--München, 1993. Kiel: Vauk (Marketing der Agrar- und Ernährungswirtschaft, 8).

Schmidt, Peter; Tatarko, Alexander; Amerkhanova, Natalia (2013): Entrepreneurial Intention, Values, and the Reasoned Action Approach. Results from a Russian Population Survey. Working paper. Higher School of Economics (Series Psychology, 12).

Schönhuth, Michael (2014): Visuelle Netzwerkforschung. Qualitative, quantitative und partizipative Zugänge. s.l.: transcript Verlag (Sozialtheorie). Available online at http://lib.myilibrary.com/detail.asp?id=631032.

Schreier, Margrit (2012): Qualitative content analysis in practice. Los Angeles, Calif.: Sage.

Schreier, Margrit (2014): Varianten qualitativer Inhaltsanalyse: ein Wegweiser im Dickicht der Begrifflichkeiten. In: *Forum Qualitative Sozialforschung / Forum: Qualitative Social Research* 15 (1), p. 27. Available online at http://nbn-resolving.de/urn:nbn:de:0114-fqs1401185.

Schulz, Manfred (Ed.) (1997): Entwicklung. Die Perspektive der Entwicklungssoziologie. Opladen: Westdt. Verl.

Schulz, Marlen (2012): Quick and easy!? Fokusgruppen in der angewandten Sozialwissenschaft. In: Marlen Schulz, Birgit Mack und Ortwin Renn (Ed.): Fokusgruppen in der empirischen Sozialwissenschaft: Von der Konzeption bis zur Auswertung. Wiesbaden: VS Verlag für Sozialwissenschaften, 9–2. Available online at https://doi.org/10.1007/978-3-531-19397-7_1.

Schuster, Ellen (2018): Vegetarian Trends. Society for Nutrition Education and Behavior. Available online at https://www.sneb.org/blog/2018/04/03/general/vegetarian-trends/, checked on March 17, 2019.

Shah, Kishore (2000): Tourism, the poor and other stakeholders. Experience in Asia. London: Overseas Development Institute (Sustainable livelihoods).

Shavgulidze, R.; Bedoshvili, D.; Aurbacher, J. (2017): Technical efficiency of potato and dairy farming in mountainous Kazbegi district, Georgia. In: *Annals of Agrarian Science* 15 (1), pp. 55–60. DOI: 10.1016/j.aasci.2016.11.002.

Sims, Rebecca (2009): Food, place and authenticity. Local food and the sustainable tourism experience. In: *Journal of Sustainable Tourism* 17 (3), pp. 321–336. DOI: 10.1080/09669580802359293.

Singh, Evangeline (2012): Linkages between tourism and agriculture in South Pacific SIDS. The case of Niue. Auckland University of Technology. Available online at http://aut.researchgateway.ac.nz/bitstream/10292/4600/3/SinghE.pdf.

Skiba, Michaeline; Marshall, Kimball P. (2011): A Cultural Lag Approach to Challenges Facing Specialty Pharmaceuticals. In: *Journal of Pharmaceutical Marketing & Management* 17 (3-4), pp. 83–100. DOI: 10.3109/J058v17n03_06.

Springer-Heinze, Andreas (2008): ValueLinks Manual. The Methodology of value chain promotion. Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ). Available online at http://eprints.icrisat.ac.in/10641/1/valuelinks_complete.pdf, checked on September 26, 2016.

Stahr, Kai (2001): Dörfliche Kommunikationsnetzwerke. Zugl.: Gießen, Univ., Diss, 2000. Weikersheim: Margraf (Kommunikation und Beratung, 42).

Stamann, Christoph; Janssen, Markus; Schreier, Margrit (2016): Qualitative Inhaltsanalyse – Versuch einer Begriffsbestimmung und Systematisierung. Forum Qualitative Sozialforschung / Forum: Qualitative Social Research, Vol 17, No 3 (2016). DOI: 10.17169/FQS-17.3.2581.

Steinke, Ines (2004): Quality criteria in qualitative research. In: Uwe Flick, Ernst von Kardoff und Ines Steinke (Ed.): A Companion to Qualitative Research. London: SAGE Publications Ltd, pp. 184–190.

Steinke, Ines (2008): Gütekriterien qualitativer Forschung. In: Uwe Flick (Ed.): Qualitative Forschung. Ein Handbuch. 6., durchges. u. aktualisierte Aufl. Reinbek bei Hamburg: Rowohlt (Rowohlts Enzyklopädie, 55628), pp. 319–331.

Taylor, Ernest; Kneafsey, Moya (2016): Food tourism and place identity in the development of Jamaica's rural culture economy. In: C. Michael Hall (Ed.): Food Tourism and Regional Development. Networks, products and trajectories. Abingdon: Taylor and Francis (Routledge Studies of Gastronomy, Food and Drink).

Telfer, David J.; Wall, Geoffrey (1996): Linkages between Tourism and Food Production. In: *Annals of Tourism Research* 23 (3), pp. 635–653. DOI: 10.1016/0160-7383(95)00087-9.

Temu, Anna; Waized, Betty; Ndyetabula, Daniel; Robinson, Ewan; Humphrey, John; Henson, Spencer (2014): Mapping Value Chains for Nutrient Dense Foods in Tanzania.

The Handbook of Rural Studies (2006). 1 Oliver's Yard, 55 City Road, London EC1Y 1SP United Kingdom: SAGE Publications Ltd.

Theissen, Tim; Aurbacher, Joachim; Bedoshvili, David; Felix-Henningsen, Peter; Hanauer, Thomas; Hüller, Sarah et al. (2019): Environmental and socio-economic resources at the landscape level - Potentials for sustainable land use in the Georgian Greater Caucasus. In: *Journal of environmental management* 232, pp. 310–320. DOI: 10.1016/j.jenvman.2018.11.024.

Thielen, Jonas Matthias (2018): Impact of touristic development on the landscape structure in a Greater Caucasus region, Georgia. Bachelor Thesis. Justus Liebig University Giessen, Giessen. Institute of Landscape Ecology and Resource Management.

Thünen, Johann Heinrich von (1921): Der isolierte Staat in Beziehung auf Landwirtschaft und Nationalökonomie. Jena.

Timms, Benjamin (2006): Caribbean agriculture–tourism linkages in a neoliberal world. Problems and prospects for St Lucia. In: *International Development Planning Review* 28 (1), pp. 35–56. DOI: 10.3828/idpr.28.1.2.

Timothy, Dallen J.; Wall, Geoffrey (1997): Selling to tourists. In: *Annals of Tourism Research* 24 (2), pp. 322–340. DOI: 10.1016/S0160-7383(97)80004-7.

Toloraia, Irakli (2012a): Dairy Value Chain Assessment. Stepantsminda and Dusheti Municipalities. USAID.

Toloraia, Irakli (2012b): Stepantsminda Municipality Tourism Value Chain Assesment. USAID.

Torres, Rebecca (2003): Linkages between tourism and agriculture in Mexico. In: *Annals of Tourism Research* 30 (3), pp. 546–566. DOI: 10.1016/S0160-7383(02)00103-2.

Torres, Rebecca; Momsen, Janet Henshall (2004): Challenges and potential for linking tourism and agriculture to achieve pro-poor tourism objectives. In: *prog dev studies* 4 (4), pp. 294–318. DOI: 10.1191/1464993404ps092oa.

Torres, Rebecca Maria; Momsen, Janet Henshall (Ed.) (2011): Tourism and agriculture. New geographies of consumption, production and rural restructuring. London: Routledge (Contemporary geographies of leisure, tourism and mobility).

UNESCO (1996): Biosphere reserves: The Seville Strategy and the Statutory Franework of the World Network. Paris: UNESCO.

United Nations (2015a): Transforming our world: The 2030 agenda for sustainable development.

United Nations (2015): The Millennium Developement Goals Report 2015. New York: United Nations.

Volk, A.; Bojnec, Š. (2014): Local action groups and the LEADER co-financing of rural development projects in Slovenia. In: *Agric. Econ. – Czech* 60 (No. 8), S. 364–375. DOI: 10.17221/180/2013-AGRICECON.

Wang, Huaiyu; Moustier, Paule; Loc, Nguyen Thi Tan (2014): Economic impact of direct marketing and contracts. The case of safe vegetable chains in northern Vietnam. In: *Food Policy* 47, pp. 13–23. DOI: 10.1016/j.foodpol.2014.04.001.

Woolcock, Michael; Narayan, Deepa (2000): Social Capital: Implications for Development Theory, Research, and Policy. In: *World Bank Research Observer* 15 (2), pp. 225–249.

World Bank (2018): Data on Georgia. Available online at https://data.worldbank.org/country/georgia, checked on March 20, 2019.

Wörner, Beate (2014): Updating ländliche regionalentwicklung: eine Reise durch 50 Jahre internationale Zusammenarbeit. Ed. v. Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ). Eschborn. Available online at https://www.icon-institute.de/publications/Updating%20Laendliche%20Regionalentwicklung.pdf, checked on September 5, 2016.

Yoshida, Akiko (2010): Role of Cultural Lag in Marriage Decline for Japan's Boom and Bust Cohorts. In: *Marriage & Family Review* 46 (1-2), pp. 60–78. DOI: 10.1080/01494921003648589.

Annex

Annex 1: Discussion Guidelines for the Focus Group Discussions

Discussion guideline focus group 1: Market-oriented farmers

Step 1: Introduction

- Welcome
- Introduction of the moderator
- Introduction of assistants/other persons
- We invited you to learn more about the opportunities and hurdles to produce and sell agricultural products in Kazbegi. To this end we have prepared some questions that we would like to discuss with you.
- We will use the results for our research project AMIES which is focusing on different types of land use in Kazbegi. It is a collaboration of the University of Giessen in Germany and three Georgian universities.
- Administrative details, duration, breaks, food and drinks
- Before starting the discussion, we would like to know from you if it is ok for you if we film the discussion? The filmed data will only be used to write down the answers of the interviews and identify who is speaking, the videos will not be published. Furthermore, no names will be published, all results will be used without referring to a name/anonymously.
- Do you agree on this? (*Declaration* of the moderator)
- Guidelines/rules for the discussion:
    - No right or wrong answers, only differing points of view
    - We are recording, only one person speaking at a time
    - We are on a first name basis
    - You do not need to agree with others, but you must listen respectfully as others share their views
    - Rules for cellular phones: We ask that your turn off your phones. If you cannot and if you must respond to a call, please do so as quietly as possible and rejoin us as quickly as you can.
    - My role as moderator is only to guide the discussion, please feel free to talk to each other
- In order to have some basic background information, we would like you to fill out the following short questionnaire on your table *(Short questionnaire)*
- Please also fill in the name tag (only first name) for the other participants

Start filming (or audio recording)/Start “official” discussion

Step 2: Warm-up

Short introduction of the participants (first name, village, type of occupation)

Step 3: Start of discussion (Main topics)

1) **Provision of food products**

Please describe how you provide yourself with agricultural food products	
Content/Main questions	**Follow up**
Description **of origin of agricultural food products**: Where do you get your food products from?	Which products do you buy? What do you produce yourself/for your own consumption? Do you get products from neighbors and friends (barter, for free?)?
Restrictions regarding the satisfaction of needs, wants and demand: Which restrictions do you face with regard to your food provision?	Which products are missing? (Seasonal shortages, not enough variety offered?) Access to markets and shops? Financial restrictions?

2) **Marketing of products and vertical cooperation**

What are the main hurdles and opportunities of marketing regional agricultural products?	
Content/Main questions	**Follow up**
Description of **marketing of agricultural food products**: How do you currently market your products?	Which products are sold? Where? How are the products brought to the market place? Is a processor or trader involved? Which role does barter play? What is the percentage of products sold and used for own consumption?
Where do you see **opportunities** for better marketing your products?	In your opinion, which products have potential for marketing? What do you think about the relation of marketing agricultural products and the growing tourism sector?
What are the main **problems and hurdles** with regard to marketing your products?	What kind of restrictions do you face (Financial restrictions, manpower, access to land and market, absence of processing units, bargaining power of traders, seasonality, etc.)? What should be improved?

How would you describe the cooperation/business relation with input suppliers, processors and traders?	
Content/Main questions	**Follow up**
Description of the **business relation with input suppliers**: How is the cooperation with input suppliers?	Where do input factors for the production come from? How are the relations, conditions (informal, contracts, bargaining power)?
Description of the **business relation with processors**: How is the cooperation with processors?	Are there any processors involved in the value chain, in bringing your product to the market? If yes, please describe how
Description of the **business relation with traders**: How is the cooperation with traders?	Is a trader involved in selling the products? How are the relations, conditions (informal, contracts, trust, dependence, bargaining power)?

3) Horizontal cooperation and trust

What is your opinion on cooperation with other producers?	
Content/Main questions	**Follow up**
Description of **cooperation among producers**: Is there any cooperation with regard to production or marketing the products? If yes, please describe	How exactly is that organized (formal, informal)? For which products? If not, why not?
Which **opportunities** do you see with regard to cooperation with other producers?	For which products? Would you be willing to cooperate? Under which circumstances? What is your opinion on institutionalized/organized cooperatives?
Which **problems** do you see with regard to cooperation with other producers?	What are the restrictions (financial, management skills, willingness, etc.)? What do you think about the importance of mutual trust with regard to cooperation between producers?

Step 4: Ending Questions

- “All things considered question”
    - This question asks participants to reflect on the entire discussion and then offer their positions or opinions on topics of central importance to the researchers.
    - Examples: "Suppose that you had one minute to talk to the governor on merit pay, the topic of today's discussion. What would you say?" or "Of all the things we discussed, what to you is the most important?"
- Summary question: After the brief oral summary the question asked is: "Is this an adequate summary?"
- Final question: The moderator reviews the purpose of the study and then asks the participants: "Have we missed anything?"

Discussion guideline focus group 2: Tourism sector representatives

Step 1: Introduction

- Welcome
- Introduction of the moderator
- Introduction of assistants/other persons
- We invited you to learn more about the opportunities and hurdles to produce, buy and sell regional agricultural products in Kazbegi. We are also interested about the linkages between tourism and the agricultural sector in Kazbegi. To this end we have prepared some questions that we would like to discuss with you.
- We will use the results for our research project AMIES which is focusing on different types of land use in Kazbegi. It is a collaboration of the University of Giessen in Germany and three Georgian universities.
- Administrative details, duration, breaks, food and drinks
- Before starting the discussion, we would like to know from you if it is ok for you if we film the discussion? The filmed data will only be used to write down the answers of the interviews and identify who is speaking, the videos will not be published. Furthermore, no names will be published, all results will be used without referring to a name/anonymously.
- Do you agree on this? (*Declaration* of the moderator)
- Guidelines/"rules" for the discussion:
  - No right or wrong answers, only differing points of view
  - We're recording, only one person speaking at a time
  - We're on a first name basis
  - You don't need to agree with others, but you must listen respectfully as others share their views
  - Rules for cellular phones: We ask that your turn off your phones. If you cannot and if you must respond to a call, please do so as quietly as possible and rejoin us as quickly as you can.
  - My role as moderator is only to guide the discussion, please feel free to talk to each other
- In order to have some basic background information, we would like you to fill out the following short questionnaire on your table *(Short questionnaire)*
- Please also fill in the name tag (only first name) for the other participants

Start filming (or audio recording)/Start “official” discussion

Step 2: Warm-up

Short introduction of the participants (first name, village, type of occupation)

Step 3: Start of discussion (Main topics)

1) **Sale of regional agricultural products**

What is the geographical origin of the agricultural food products you sell?	
Content/Main questions	**Follow up**
Origin of products: Where do the agricultural food products you sell in your shop/offer to your guests come from?	Do you also produce any food products yourself and sell them? If yes, which products? What do you use for your own consumption?
Regional agricultural products sold: Which regional agricultural products do you sell/ offer to your guests/customers?	On what does this depend (Seasonality, demand for traditional dishes, willingness to pay of the guests/customers?)?

In your experience, what are the opportunities and hurdles with regard to increasing the sale of regional agricultural products?	
Content/Main questions	**Follow up**
Where do you see **opportunities** with regard to selling more regional food products?	Demand of the tourists, interest in traditional dishes, growing interest/demand of the local population in regional products, higher quality, shorter transport distances?
Where do you see **hurdles** with regard to selling more regional food products?	Financial restrictions, demand, availability, seasonality, hygiene conditions, etc.?

2) **Awareness of added value of regional products**

What is your opinion on the value added of regional products and opportunities for selling, regional marketing?	
Content/Main questions	**Follow up**
Awareness of added value of regional products: In your opinion, what are the advantages/the value added of regional agricultural food products?	What are the advantages compared to imported products (quality, freshness, organic etc.)? Would you pay more for regional products if you could support the sustainability of the region (contribute to higher income of local population, biodiversity)? If not, why (restrictions)?
Awareness of added value of regional products of tourists, customers: What do you think your guests/customers know about the added value/the advantages of regional agricultural food products?	Do you think they would pay more for this value added? Or, if you offer these products, do they already do that? How would you convince them to pay for it?

3) Cooperation/Business relationship with local farmers (vertical cooperation)

How is the relationship to local agricultural producers?	
Content/Main questions	**Follow up**
Is there any **cooperation/business relationships with local farmers**? If yes, please describe	How is the cooperation/relation (informal, do you know the farmers, friends, family?; contracts?)? If not: What are the reasons for not buying from local producers? What should be improved/change?
What are the **advantages and disadvantages or problems** you face with regard to buying from local producers?	Constant amount, quality, reliability, etc.? What do you think on the importance of trust with regard to cooperation with farmers?
What is your **opinion on cooperating (on a contract basis) with a group of producers (cooperative)?**	What would be advantages, problems, hurdles, for you (constant amount, quality control, maybe higher prices)?

Step 4: Ending Questions

- All things considered question
  - This question asks participants to reflect on the entire discussion and then offer their positions or opinions on topics of central importance to the researchers.
  - Examples: "Suppose that you had one minute to talk to the governor on merit pay, the topic of today's discussion. What would you say?" or "Of all the things we discussed, what to you is the most important?"
- Summary question: After the brief oral summary the question asked is: "Is this an adequate summary?"
- Final question: The moderator reviews the purpose of the study and then asks the participants: "Have we missed anything?"

Discussion guideline focus group 3: Small-scale agri-food producers

Step 1: Introduction

- Welcome
- Introduction of the moderator
- Introduction of assistants/other persons
- We invited you to learn more about the opportunities and hurdles to produce and sell agricultural products in Kazbegi. To this end we have prepared some questions that we would like to discuss with you.
- We will use the results for our research project AMIES which is focusing on different types of land use in Kazbegi. It is a collaboration of the University of Giessen in Germany and three Georgian universities.
- Administrative details, duration, breaks, food and drinks
- Before starting the discussion, we would like to know from you if it is ok for you if we film the discussion? The filmed data will only be used to write down the answers of the interviews and identify who is speaking, the videos will not be published. Furthermore, no names will be published, all results will be used without referring to a name/anonymously.
- Do you agree on this? (*Declaration* of the moderator)
- Guidelines/"rules" for the discussion:
    - No right or wrong answers, only differing points of view
    - We're recording, only one person speaking at a time
    - We're on a first name basis
    - You don't need to agree with others, but you must listen respectfully as others share their views
    - Rules for cellular phones: We ask that your turn off your phones. If you cannot and if you must respond to a call, please do so as quietly as possible and rejoin us as quickly as you can.
    - My role as moderator is only to guide the discussion, please feel free to talk to each other
- In order to have some basic background information, we would like you to fill out the following short questionnaire on your table *(Short questionnaire)*
- Please also fill in the name tag (only first name) for the other participants

Start filming (or audio recording)/Start "official" discussion

Step 2: Warm-up
Short introduction of the participants (first name, village, type of occupation)

Step 3: Start of discussion (Main topics)

1) Provision of food products

Please describe how you provide yourself with agricultural food products	
Content/Main questions	**Follow up**
Description **of origin of agricultural food products**: Where do you get your food products from?	Which products do you buy? What do you produce yourself? Do you get products from neighbors and friends (barter, for free?)?
Restrictions regarding the satisfaction of needs, wants and demand?	Which products are missing? (Seasonal shortages, not enough variety offered?) Access to markets and shops? Financial restrictions?

2) Marketing of products

What are the reasons for not selling agricultural products and where do you see opportunities of marketing regional agricultural products?	
Content/Main questions	**Follow up**
What are the **reasons for not selling** your products?	What are the restrictions? (Financial restrictions, land, manpower, access to input suppliers, processors, traders, markets?)
Would you be **willing to sell/interested in selling** your own products?	If yes, describe why If no, why? What should improve?
Where do you see **opportunities** to sell agricultural products?	In general, and with regard to your own production? Ideas? Which products could potentially be sold, under which circumstances? What is your opinion on linkages between marketing agricultural products and the growing tourism sector?

3) Horizontal cooperation and trust

What is your opinion on cooperation with other producers (production or marketing)?	
Content/Main questions	**Follow up**
Could you **imagine cooperating** with other producers?	Would you be willing to do that (enter into a “business relation”); How would you describe your relation to other producers (competition, trust)?
Opportunities to produce or market together: Which opportunities do you see with regard to cooperation with other producers?	For which products? How would you organize that? (Formal, informal, in the field of production or marketing?); Would you already know someone for cooperation?
Which **hurdles or restrictions** do you see with regard to cooperating with other producers?	Which restrictions do you face (financial, management skills etc.)? What do you think about the importance of mutual trust with regard to cooperation among producers?

Step 4: Ending Questions

- All things considered question
- This question asks participants to reflect on the entire discussion and then offer their positions or opinions on topics of central importance to the researchers.
- Examples: "Suppose that you had one minute to talk to the governor on merit pay, the topic of today's discussion. What would you say?" or "Of all the things we discussed, what to you is the most important?"
- Summary question: After the brief oral summary the question asked is: "Is this an adequate summary?"
- Final question: The moderator reviews the purpose of the study and then asks the participants: "Have we missed anything?"

Annex 2: Interview Guidelines for the Expert Interviews

Interview guideline Georgian Farmers' Association (GFA) – Expert E1

Step 1: Introduction

- Hello, thank you for your time and for this interview
- Introduction of interviewer/myself (exchange of business cards)
- Introduction of AMIES II project (Project: “AMIES II - Scenario development for sustainable land use in the Greater Caucasus, Georgia”, Unit D1)
- Ilia State University, Tbilisi State University and the Agricultural University of Georgia together with Justus Liebig University Giessen and the Center for International Development and Environmental Research (ZEU). The overall objective of is to foster sustainable land use and improve socio-economic conditions of the population of the Stepantsminda Region. Project unit D1 analyzes bottlenecks in agri-food value chains and aims at identifying efficient marketing structures of local food products, also with regard to tourism. In the project unit that I am involved in, we would like to learn more about agriculture and tourism, and potential linkages of both sectors, in particular with regard to regional food. Our geographical focus is on the Kazbegi region.
- I have already conducted some explorative interviews and focus group discussions with local farmers and guesthouse owners, but now I would like to get some more detailed background information.
- As you are president/chairwoman of the GFA, I am sure that your knowledge will be very valuable for our project.

  Before starting, I would like to know from you if it is ok for you if we record the interview? This is only for research purposes, if you prefer, no names will be published, all results will be used without referring to a name/anonymously. Do you agree on this? (Handing out the *declaration of consent*, signature (one for the interviewee, one for the interviewer)

Step 2: Warm-up

Let us start with a short introduction of yourself and your occupation

- What is your professional background?
- What is your current occupation?
- What are the main objectives organization you currently work for?

Step 3: Thematic blocks

1) Agri-food chains – bottlenecks and potentials

Content/Main questions	**Follow up**
How does the agri-food chain in Georgia look like?	Input supply (finance, technical equipment..), production, processing, marketing (in general and to tourists), relations between value chain actors, market conditions (hurdles and potentials)

2) Marketing of agri-food products

What are the main hurdles and opportunities marketing agricultural products?	
Content/Main questions	**Follow up**
How do the food producing households or smallholder farmers market their products?	Which products are sold? Where? How are the products brought to the market place? Are traders involved? Who is processing the products? Which role does barter play?
What are the main **problems and hurdles** with regard to marketing agri-food products?	Financial restrictions, manpower, access to land and market, absence of processing units, bargaining power of traders, seasonality, etc.? What should be improved?
Where do you see **opportunities** for better marketing their products?	In your opinion, which products have potential for being marketed by smallholder farmers?
How do you support smallholder farmers in this regard?	

3) Cooperation and cooperatives

Content/Main questions	**Follow up**
What are the advantages for farmers in joining a cooperative?	Are farmers aware of that?
Willingness to cooperate?	Relation to former Kolkhoz system? Which role does trust play?
Which **problems** do you see with regard to cooperation with other producers?	What are the restrictions (financial, management skills, willingness, etc.)? What do you think about the importance of mutual trust with regard to cooperation between producers? Do people associate cooperatives with former Soviet kolkhoz system?
How do you support farmers in establishing cooperatives?	More production or marketing oriented (first level, second level)? Also processing (e.g. in the case of dairy products)? For which products? Who is buying from the cooperatives? Managerial skills

Example of cooperatives from Kazbegi: Established but not producing. How could such problems be overcome?	Costs, equipment, etc.
In your opinion, could the establishment of a marketing cooperative or a cooperative shop be suitable to offer local food products to tourists? (including selling of "food souvenirs")	How exactly could this be implemented? Which parts of the value chain should be covered (also processing?)? Examples from other regions

4) **Kazbegi region (if applicable)**

Content/Main questions	**Follow up**
What is the situation of smallholder farmers in Kazbegi?	**Production, Marketing, Cooperation (cooperatives)**

5) **As you know, we already conducted some other interviews and FGD. Some products were mentioned very often: I would like to know your opinion on the potential these products have for smallholder farmers, (with regard to production and marketing, cooperatives and linkages to tourists).**

What is your opinion on the potential of the following products?	
Honey Dairy products Meat (cattle, sheep, pigs, poultry, rabbits) Trout Potatoes Vegetables (lettuce, broccoli, etc.) Strawberries Other berries, blackcurrant, sea buckthorn Herbs (medicinal plants, tea)	Financial investment Knowledge Government support Hygiene conditions Processing facilities Quality guarantee schemes Branding Certification Organic products
If you had to select one product which one would you choose?	And could you please describe why, and how you would produce it and market it to tourists? (Is there another product, you consider to have the highest potential? Which one?)

Additional info sheet (printed separately and put on the table for the interviewee):

Production	***Marketing***	***Cooperative***	***Linkages to tourism***

Production	***Marketing***

Honey
Dairy
Meat (cattle, sheep, pigs, poultry, rabbits)
Trout
Potatoes
Vegetables (lettuce, broccoli, etc.), Reactivation of greenhouses
Strawberries
Other berries, blackcurrant, sea buckthorn
Herbs (medicinal plants, tea)
Beer
Caucasian fir (Nordmanntanne)

6) Other

Other questions on the region	
Are there any best practice examples of smallholder farmers in Georgia?	If yes, what did they do? Where? Activities related to tourism? Or examples from Kazbegi?
What are the principles you are trying to implement at your own farm?	What exactly are you doing there?

Step 4: Ending

- Of all the things we discussed, what do you consider the most important?
- Is there anything we have missed, or that you would like to add?
- Would you recommend anyone else we should talk to?
- Do you have information, brochures etc. on your company/projects that you could provide us with?
- In case I have further questions, would it be ok if I get back to you? (contact details)

Thank you!

Interview guideline Agricultural Cooperatives Development Agency (ACDA) – Expert E2

Step 1: Introduction

- Hello, thank you for your time and for this interview
- Introduction of interviewer/myself (exchange of business cards)
- Introduction of AMIES II project (Project: "AMIES II - Scenario development for sustainable land use in the Greater Caucasus, Georgia", Unit D1)
- Ilia State University, Tbilisi State University and the Agricultural University of Georgia together with Justus Liebig University Giessen and the Center for International Development and Environmental Research (ZEU). The overall objective of is to foster sustainable land use and improve socio-economic conditions of the population of the Stepantsminda Region. Project unit D1 analyzes bottlenecks in agri-food value chains and aims at identifying efficient marketing structures of local food products, also with regard to tourism. In the project unit that I am involved in, we would like to learn more about agriculture and tourism, and potential linkages of both sectors, in particular with regard to regional food. Our geographical focus is on the Kazbegi region.
- I have already conducted some explorative interviews and focus group discussions with local farmers and guesthouse owners, but now I would like to get some more detailed background information.
- As you are heading the ACDA, I am sure that your knowledge will be very valuable for our project.

  Before starting, I would like to know from you if it is ok for you if we record the interview? This is only for research purposes, if you prefer, no names will be published, all results will be used without referring to a name/anonymously. Do you agree on this? (Handing out the *declaration of consent*, signature (one for the interviewee, one for the interviewer)

Step 2: Warm-up

Let us start with a short introduction of yourself and your occupation

- What is your professional background?
- What is your current occupation?
- What are the main objectives organization you currently work for?

Step 3: Thematic blocks

1) Agri-food chains – bottlenecks and potentials

Content/Main questions	Follow up
How does the agri-food chain in Kazbegi/Georgia look like?	Input supply (finance, technical equipment..), production, processing, marketing (in general and to tourists), relations between value chain actors, market conditions (hurdles and potentials)

2) Marketing of agri-food products

What are the main hurdles and opportunities of marketing regional agricultural products?	
Content/Main questions	**Follow up**
Description of **marketing of agricultural food products**: How do the food producing households or smallholder farmers (in Kazbegi) currently market their products?	Which products are sold? Where? How are the products brought to the market place? Is a processor or trader involved? Which role does barter play? (What is the percentage of products sold and used for own consumption?)
Where do you see **opportunities** for better marketing their products?	In your opinion, which products have potential for marketing? (What do you think about the relation of marketing agricultural products and the growing tourism sector?)
What are the main **problems and hurdles** with regard to marketing agri-food products?	What kind of restrictions do people in Kazbegi face (Financial restrictions, manpower, access to land and market, absence of processing units, bargaining power of traders, seasonality, etc.)? What should be improved?

3) Cooperation and cooperatives

Content/Main questions	Follow up
How are agricultural cooperatives In Georgia organized?	How many members (difference in mountainous regions), managerial structures, who supports the establishment? Requirements
What kind of cooperatives?	More production or marketing oriented (first level, second level)? Where does processing take place (e.g. in the case of dairy products)? For which products?
What are the advantages for farmers in joining a cooperative?	Costs, equipment, etc.
Willingness to cooperate?	Relation to former kolkhoz system? Which role does trust play?

Who is buying products from the cooperatives?	Intermediaries? Directly selling to supermarkets or other buyers?
What are the advantages for the buyers when buying from a cooperative?	Food safety, quantity
Which **problems** do you see with regard to cooperation with other producers?	What are the restrictions (financial, management skills, willingness, etc.)? What do you think about the importance of mutual trust with regard to cooperation between producers? Do people in the region associate cooperatives with former Soviet kolkhoz system?
Example of cooperative from Kazbegi: Established but not producing. How could such problems be overcome?	

4) **Cooperation in the Kazbegi region**

Content/Main questions	**Follow up**
Description of **cooperation among producers**: Is there any cooperation with regard to production or marketing the products in Kazbegi? If yes, please describe	How exactly is that organized (formal, informal)? For which products? If not, why not? How many (officially registered and unofficially), in which field, more production or marketing oriented? How are they organized? Supported? How many are really active?
Which **opportunities** do you see with regard to cooperation with other producers?	For which products? What type of cooperative (production, processing, marketing)

5) **Marketing mechanisms of regional food, tourism**

As one of our objectives is to identify efficient marketing mechanisms of agri food products, also in relation to tourism, I have prepared some questions in this regard as well:

Content/Main questions	**Follow up**
In your opinion, could the establishment of a marketing cooperative or a cooperative shop be suitable to offer local food products to tourists? (including selling of "food souvenirs")	How exactly could this be implemented? Which parts of the value chain should be covered (also processing?)? Which role does trust play in this regard? In your opinion, are people in the region open to cooperation? Do they associate it with former Soviet farming systems? What are or could be hurdles? What are or could be opportunities, advantages? Who could/does support this?

6) **As you know, we already conducted some other interviews and FGD. Some products were mentioned very often: I would like to know your opinion on the potential of these products (with regard to production and marketing, cooperatives and linkages to tourists).)**

What is your opinion on the potential of the following products?	
Honey Dairy products Meat (cattle, sheep, pigs, poultry, rabbits) Trout Potatoes Vegetables (lettuce, broccoli, etc.) Strawberries Other berries, blackcurrant, sea buckthorn Herbs (medicinal plants, tea) Beer Caucasian fir (Nordmanntanne)	Financial investment Knowledge Government support Hygiene conditions Processing facilities Quality guarantee schemes Branding Certification
If you had to select one product which one would you choose?	And could you please describe why, and how you would produce it and market it to tourists? (Is there another product, you consider to have the highest potential? Which one?)

Additional info sheet (printed separately and put on the table for the interviewee):

Production	***Marketing***	***Cooperative***	***Linkages to tourism***

Production	***Marketing***

Honey
Dairy
Meat (cattle, sheep, pigs, poultry, rabbits)
Trout
Potatoes
Vegetables (lettuce, broccoli, etc.), Reactivation of greenhouses
Strawberries
Other berries, blackcurrant, sea buckthorn
Herbs (medicinal plants, tea)
Beer
Caucasian fir (Nordmanntanne)

7) Other

Other questions on the region	
Are there any best practice examples of agricultural cooperatives in Georgia?	If yes, what did they do? Where? Or examples from Kazbegi?

Step 4: Ending

- Of all the things we discussed, what do you consider the most important?
- Is there anything we have missed, or that you would like to add?
- Would you recommend anyone else we should talk to?
- Do you have information, brochures etc. on your company/projects that you could provide us with?
- In case I have further questions, would it be ok if I get back to you? (contact details)

Thank you!

Interview guideline Elkana – Expert E3

Step 1: Introduction

- Hello, thank you for your time and for this interview
- Introduction of interviewer/myself (exchange of business cards)
- Introduction of AMIES II project (Project: "AMIES II - Scenario development for sustainable land use in the Greater Caucasus, Georgia", Unit D1)
- Ilia State University, Tbilisi State University and the Agricultural University of Georgia together with Justus Liebig University Giessen and the Center for International Development and Environmental Research (ZEU. The overall objective of is to foster sustainable land use and improve socio-economic conditions of the population of the Stepantsminda Region. Project unit D1 analyzes bottlenecks in agri-food value chains and aims at identifying efficient marketing structures of local food products, also with regard to tourism. In the project unit that I am involved in, we would like to learn more about agriculture and tourism, and potential linkages of both sectors, in particular with regard to regional food. Our geographical focus is on the Kazbegi region.
- I have already conducted some explorative interviews and focus group discussions with local farmers and guesthouse owners, but now I would like to get some more detailed background information.
- As you have lots of experience in the field of agritourism, I am sure that your knowledge will be very valuable for our project.

  Before starting, I would like to know from you if it is ok for you if we record the interview? This is only for research purposes, if you prefer, no names will be published, all results will be used without referring to a name/anonymously. Do you agree on this? (Handing out the **declaration of consent**, signature (one for the interviewee, one for the interviewer)

Step 2: Warm-up

Let us start with a short introduction of yourself and your occupation

- What is your professional background?
- What is your current occupation?
- What are the main objectives/activities of the project/company you currently work for?

Step 3: Thematic blocks

1) Agri-food chains – bottlenecks and potentials

Content/Main questions	Follow up
How does the agri-food chain in Georgia/Kazbegi look like?	What are the main hurdles? Input supply (finance, technical equipment..), processing, marketing (in general and to tourists), relations between value chain actors, market conditions
Where does the future potential of the agri-food sector lie?	Influence of the tourism sector?

2) Linkages of agriculture and tourism in the Kazbegi region

Content/Main questions	Follow up
According to your assessment, what could be potential linkages of the agri-food chain with tourism?	What are connecting points of agri-food chain actors and tourists as the end consumer?
Which role does local, traditional food play in tourism in Kazbegi?	Are there unique agricultural products or food in Kazbegi? Which ones?
Which role does the selling of "food" souvenirs related to agriculture play?	Small honey jars, etc. Which products would have potential?
How do guesthouses, hotels, and cafés offer regional food?	Which products, dishes? Quality? Problems?
How important are organic products in agritourism?	How is the awareness of producers on the added value? How is the awareness of the customers? Would/do they pay more for such products? Role of certification?

3) Marketing mechanisms of regional food

Content/Main questions	Follow up
Which mechanisms would be most suitable to sell regional food products to tourists?	Direct marketing/ at the farm gate? Sale to bigger hotels? Sale in the own guesthouse, restaurant? In combination with "agri-activities", like watching how cheese is produced etc.? What about souvenirs?
Would the establishment of a marketing cooperative or a cooperative shop be suitable?	How exactly could this be implemented? Which parts of the value chain should be covered (also processing?)? Which role does trust play in this regard? In your opinion, are people in the region open to cooperation? Do they associate it with former Soviet farming systems? What are or could be hurdles? What are or could be opportunities, advantages? Who could/does support this?

What is your opinion on potentials and hurdles of regional branding?	Alpine products, organic, etc. Who has knowledge in branding, how could it be implemented? As there are no modern processing facilities, should the focus be on traditional methods?

4) **As you know, we already conducted some other interviews and FGD. Some products were mentioned very often: I would like to know your opinion on the potential of these products (with regard to production and marketing, cooperatives and linkages to tourists).**

What is your opinion on the potential of the following products?	
Honey Dairy products Meat (cattle, sheep, pigs, poultry, rabbits) Trout Potatoes Vegetables (lettuce, broccoli, etc.) Strawberries Other berries, blackcurrant, sea buckthorn Herbs (medicinal plants, tea) Beer Caucasian fir (Nordmanntanne)	Financial investment Knowledge Government support Hygiene conditions Processing facilities Quality guarantee schemes Branding Certification
If you had to select one product which one would you choose?	And could you please describe why, and how you would produce it and market it to tourists? (Is there another product, you consider to have the highest potential? Which one?)

Additional info sheet (printed separately and put on the table for the interviewee):

Production	***Marketing***	***Cooperative***	***Linkages to tourism***

Production	***Marketing***

Honey
Dairy
Meat (cattle, sheep, pigs, poultry, rabbits)
Trout
Potatoes
Vegetables (lettuce, broccoli, etc.), Reactivation of greenhouses
Strawberries
Other berries, blackcurrant, sea buckthorn
Herbs (medicinal plants, tea)
Beer
Caucasian fir (Nordmanntanne)

5) Other

Other questions on the region	
Are there any best practice examples of farmers who implemented tourism measures closely related to the agri-food chain?	If yes, what did they do? Where? Or other examples, in other regions?
News on hotel in the center of Juta, new hotel in Sno?	Other new agricultural or touristic activities?
Which projects are currently going on in the Kazbegi region (in the field of agriculture and/or tourism)?	Development organizations Government
Could marketing of regional food contribute to ecological sustainability in the region?	If yes, why and how?
Are there still any plans to develop a skiing area in Kazbegi?	
Is there a source on the statistics of tourism activities in the Kazbegi region?	Number of guesthouses (registered and unregistered etc.)

Step 4: Ending

- Of all the things we discussed, what do you consider the most important?
- Is there anything we have missed, or that you would like to add?
- Would you recommend anyone else we should talk to?
- Do you have information, brochures etc. on your company/projects that you could provide us with?
- In case I have further questions, would it be ok if I get back to you? (contact details)

- Thank you!

Interview guideline People in Need (PIN) – Expert E4

Step 1: Introduction

- Hello, thank you for your time and for this interview
- Introduction of interviewer/myself (exchange of business cards)
- Introduction of AMIES II project (Project: "AMIES II - Scenario development for sustainable land use in the Greater Caucasus, Georgia", Unit D1)
- Ilia State University, Tbilisi State University and the Agricultural University of Georgia together with Justus Liebig University Giessen and the Center for International Development and Environmental Research (ZEU. The overall objective of is to foster sustainable land use and improve socio-economic conditions of the population of the Stepantsminda Region. Project unit D1 analyzes bottlenecks in agri-food value chains and aims at identifying efficient marketing structures of local food products, also with regard to tourism. In the project unit that I am involved in, we would like to learn more about agriculture and tourism, and potential linkages of both sectors, in particular with regard to regional food. Our geographical focus is on the Kazbegi region.
- I have already conducted some explorative interviews and focus group discussions with local farmers and guesthouse owners, but now I would like to get some more detailed background information.
- As you are involved in the PIN project in Kazbegi, I am sure that your knowledge will be very valuable for our project.

  Before starting, I would like to know from you if it is ok for you if we record the interview? This is only for research purposes, if you prefer, no names will be published, all results will be used without referring to a name/anonymously. Do you agree on this? (Handing out the *declaration of consent*, signature (one for the interviewee, one for the interviewer)

Step 2: Warm-up

Let us start with a short introduction of yourself and your occupation

- What is your professional background?
- What is your current occupation?
- What are the main objectives/activities of the project/company you currently work for?

Step 3: Thematic blocks

1) **Agri-food chains – bottlenecks and potentials**

Content/Main questions	Follow up
How does the agri-food chain in Kazbegi look like?	Input supply (finance, technical equipment..), production, processing, marketing (in general and to tourists), relations between value chain actors, market conditions (hurdles and potentials)

2) **Marketing of agri-food products**

What are the main hurdles and opportunities of marketing regional agricultural products?	
Content/Main questions	**Follow up**
Description of **marketing of agricultural food products**: How do the farmers, food producing households in Kazbegi currently market their products?	Which products are sold? Where? How are the products brought to the market place? Is a processor or trader involved? Which role does barter play? (What is the percentage of products sold and used for own consumption?)
Where do you see **opportunities** for better marketing their products?	In your opinion, which products have potential for marketing? (What do you think about the relation of marketing agricultural products and the growing tourism sector?)
What are the main **problems and hurdles** with regard to marketing agri-food products?	What kind of restrictions do people in Kazbegi face (Financial restrictions, manpower, access to land and market, absence of processing units, bargaining power of traders, seasonality, etc.)? What should be improved?

3) **Cooperation and cooperatives**

Content/Main questions	Follow up
Description of **cooperation among producers**: Is there any cooperation with regard to production or marketing the products in Kazbegi? If yes, please describe	How exactly is that organized (formal, informal)? For which products? If not, why not?
How is the situation of cooperatives in Kazbegi?	How many (officially registered and unofficially), in which field, more production or marketing oriented? How are they organized? Supported? How many are really active?
Which **opportunities** do you see with regard to cooperation with other producers?	For which products? What type of cooperative (production, processing, marketing)

Which **problems** do you see with regard to cooperation with other producers?	What are the restrictions (financial, management skills, willingness, etc.)? What do you think about the importance of mutual trust with regard to cooperation between producers? Do people in the region associate cooperatives with former Soviet kolkhoz system?

4) Linkages of agriculture and tourism in the Kazbegi region

Content/Main questions	**Follow up**
According to your assessment, what could be potential linkages of the agri-food chain with tourism?	What are connecting points of agri-food chain actors and tourists as the end consumer?
Which role does local, traditional food play in tourism in Kazbegi?	Are there unique agricultural products or food in Kazbegi? Which ones?
Which role does the selling of "food" souvenirs related to agriculture play?	Small honey jars, etc. Which products would have potential?
How do guesthouses, hotels, and cafés offer regional food?	Which products, dishes? Quality? Problems?
How important are organic products in agritourism?	How is the awareness of producers on the added value? How is the awareness of the customers? Would/do they pay more for such products? Role of certification?

5) Marketing mechanisms of regional food

Content/Main questions	**Follow up**
Which mechanisms would be most suitable to sell regional food products to tourists?	Direct marketing/ at the farm gate Sell to bigger hotels Sell in the own guesthouse, restaurant In combination with "agri-activities", like watching how cheese is produced etc. What about souvenirs?
Would the establishment of a marketing cooperative or a cooperative shop be suitable?	How exactly could this be implemented? Which parts of the value chain should be covered (also processing?)? Which role does trust play in this regard? In your opinion, are people in the region open to cooperation? Do they associate it with former Soviet farming systems? What are or could be hurdles? What are or could be opportunities, advantages? Who could/does support this?
What is your opinion on potentials and hurdles of regional branding?	Alpine products, organic, etc. Who has knowledge in branding, how could it be implemented? As there are no modern processing facilities, should the focus be on traditional methods?

6) **As you know, we already conducted some other interviews and FGD. Some products were mentioned very often: I would like to know your opinion on the potential of these products (with regard to production and marketing, cooperatives and linkages to tourists).**

What is your opinion on the potential of the following products?	
Honey Dairy products Meat (cattle, sheep, pigs, poultry, rabbits) Trout Potatoes Vegetables (lettuce, broccoli, etc.) Strawberries Other berries, blackcurrant, sea buckthorn Herbs (medicinal plants, tea) Beer Caucasian fir (Nordmanntanne)	Financial investment Knowledge Government support Hygiene conditions Processing facilities Quality guarantee schemes Branding Certification
If you had to select one product which one would you choose?	And could you please describe why, and how you would produce it and market it to tourists? (Is there another product, you consider to have the highest potential? Which one?)

Additional info sheet (printed separately and put on the table for the interviewee):

Production	***Marketing***	***Cooperative***	***Linkages to tourism***

Production	***Marketing***

Honey
Dairy
Meat (cattle, sheep, pigs, poultry, rabbits)
Trout
Potatoes
Vegetables (lettuce, broccoli, etc.), Reactivation of greenhouses
Strawberries
Other berries, blackcurrant, sea buckthorn
Herbs (medicinal plants, tea)
Beer
Caucasian fir (Nordmanntanne)

7) Other

Other questions on the region	
Are there any best practice examples of farmers who market their products successfully or who implemented tourism measures closely related to the agri-food chain?	If yes, what did they do? Where?
News on hotel in the center of Juta, new hotel in Sno?	Other new agricultural or touristic activities?
Which projects are currently going on in the Kazbegi region (in the field of agriculture and/or tourism)?	Development organizations Government
Could marketing of regional food contribute to ecological sustainability in the region?	If yes, why and how?
Are there still any plans to develop a skiing area in Kazbegi?	
Is there a source on the statistics of tourism activities in the Kazbegi region?	Number of guesthouses (registered and unregistered etc.)

Step 4: Ending

- Of all the things we discussed, what do you consider the most important?
- Is there anything we have missed, or that you would like to add?
- Would you recommend anyone else we should talk to?
- Do you have information, brochures etc. on your company/projects that you could provide us with?
- In case I have further questions, would it be ok if I get back to you? (contact details)

Thank you!

Interview guideline FAO – Expert E5 (and E6[137])

Step 1: Introduction

- Hello, thank you for your time and for this interview
- Introduction of interviewer/myself (exchange of business cards)
- Introduction of AMIES II project (Project: "AMIES II - Scenario development for sustainable land use in the Greater Caucasus, Georgia", Unit D1)
- Ilia State University, Tbilisi State University and the Agricultural University of Georgia together with Justus Liebig University Giessen and the Center for International Development and Environmental Research (ZEU. The overall objective of is to foster sustainable land use and improve socio-economic conditions of the population of the Stepantsminda Region. Project unit D1 analyzes bottlenecks in agri-food value chains and aims at identifying efficient marketing structures of local food products, also with regard to tourism. In the project unit that I am involved in, we would like to learn more about agriculture and tourism, and potential linkages of both sectors, in particular with regard to regional food. Our geographical focus is on the Kazbegi region.
- I have already conducted some explorative interviews and focus group discussions with local farmers and guesthouse owners, but now I would like to get some more detailed background information.
- As you are involved in the FAO project, I am sure that your knowledge will be very valuable for our project.

  Before starting, I would like to know from you if it is ok for you if we record the interview? This is only for research purposes, if you prefer, no names will be published, all results will be used without referring to a name/anonymously. Do you agree on this? (Handing out the *declaration of consent*, signature (one for the interviewee, one for the interviewer)

Step 2: Warm-up

Let us start with a short introduction of yourself and your occupation

- What is your professional background?
- What is your current occupation?
- What are the main objectives/activities of the project/company you currently work for?

[137] The same interview guideline was used for expert E6 as this person was interviewed spontaneously at the same location.

Step 3: Thematic Blocks

1) Agri-food chains – bottlenecks and potentials

Content/Main questions	**Follow up**
How does the agri-food chain in Kazbegi/Georgia look like?	Input supply (finance, technical equipment..), production, processing, marketing (in general and to tourists), relations between value chain actors, market conditions (hurdles and potentials)

2) Marketing of agri-food products

What are the main hurdles and opportunities of marketing regional agricultural products?	
Content/Main questions	**Follow up**
Description of **marketing of agricultural food products**: How do the farmers, food producing households in Kazbegi currently market their products?	Which products are sold? Where? How are the products brought to the market place? Is a processor or trader involved? Which role does barter play? (What is the percentage of products sold and used for own consumption?)
Where do you see **opportunities** for better marketing their products?	In your opinion, which products have potential for marketing? (What do you think about the relation of marketing agricultural products and the growing tourism sector?)
What are the main **problems and hurdles** with regard to marketing agri-food products?	What kind of restrictions do people in Kazbegi face (Financial restrictions, manpower, access to land and market, absence of processing units, bargaining power of traders, seasonality, etc.)? What should be improved?

3) Cooperation and cooperatives

Content/Main questions	**Follow up**
Description of **cooperation among producers**: Is there any cooperation with regard to production or marketing the products in Kazbegi? If yes, please describe	How exactly is that organized (formal, informal)? For which products? If not, why not?
How is the situation of cooperatives in Kazbegi?	How many (officially registered and unofficially), in which field, more production or marketing oriented? How are they organized? Supported? How many are really active?

Which **opportunities** do you see with regard to cooperation with other producers?	For which products? What type of cooperative (production, processing, marketing)
Which **problems** do you see with regard to cooperation with other producers?	What are the restrictions (financial, management skills, willingness, etc.)? What do you think about the importance of mutual trust with regard to cooperation between producers? Do people in the region associate cooperatives with former Soviet kolkhoz system?

4) Linkages of agriculture and tourism in the Kazbegi region

Content/Main questions	**Follow up**
According to your assessment, what could be potential linkages of the agri-food chain with tourism?	What are connecting points of agri-food chain actors and tourists as the end consumer?
Which role does local, traditional food play in tourism in Kazbegi?	Are there unique agricultural products or food in Kazbegi? Which ones?
Which role does the selling of “food” souvenirs related to agriculture play?	Small honey jars, etc. Which products would have potential?
How do guesthouses, hotels, and cafés offer regional food?	Which products, dishes? Quality? Problems?
How important are organic products in agritourism?	How is the awareness of producers on the added value? How is the awareness of the customers? Would/do they pay more for such products? Role of certification?

5) Marketing mechanisms of regional food

Content/Main questions	**Follow up**
Which mechanisms would be most suitable to sell regional food products to tourists?	Direct marketing/ at the farm gate Sale to bigger hotels? Sale in the own guesthouse, restaurant? In combination with “agri-activities”, like watching how cheese is produced etc.? What about souvenirs?
Would the establishment of a marketing cooperative or a cooperative shop be suitable?	How exactly could this be implemented? Which parts of the value chain should be covered (also processing?)? Which role does trust play in this regard? In your opinion, are people in the region open to cooperation? Do they associate it with former Soviet farming systems? What are or could be hurdles? What are or could be opportunities, advantages? Who could/does support this?

What is your opinion on potentials and hurdles of regional branding?	Alpine products, organic, etc. Who has knowledge in branding, how could it be implemented? As there are no modern processing facilities, should the focus be on traditional methods?

6) **As you know, we already conducted some other interviews and FGD. Some products were mentioned very often: I would like to know your opinion on the potential of these products (with regard to production and marketing, cooperatives and linkages to tourists).**

What is your opinion on the potential of the following products?	
Honey Dairy products Meat (cattle, sheep, pigs, poultry, rabbits) Trout Potatoes Vegetables (lettuce, broccoli, etc.) Strawberries Other berries, blackcurrant, sea buckthorn Herbs (medicinal plants, tea) Beer Caucasian fir (Nordmanntanne)	Financial investment Knowledge Government support Hygiene conditions Processing facilities Quality guarantee schemes Branding Certification
If you had to select one product which one would you choose?	And could you please describe why, and how you would produce it and market it to tourists? (Is there another product, you consider to have the highest potential? Which one?)

Additional info sheet (printed separately and put on the table for the interviewee):

Production	***Marketing***	***Cooperative***	***Linkages to tourism***

Production	***Marketing***

Honey
Dairy
Meat (cattle, sheep, pigs, poultry, rabbits)
Trout
Potatoes
Vegetables (lettuce, broccoli, etc.), Reactivation of greenhouses
Strawberries
Other berries, blackcurrant, sea buckthorn
Herbs (medicinal plants, tea)
Beer
Caucasian fir (Nordmanntanne)

7) Other

Other questions on the region	
Are there any best practice examples of farmers who market their products successfully or who implemented tourism measures closely related to the agri-food chain?	If yes, what did they do? Where? Or examples from other regions of Georgia?
Could marketing of regional food contribute to ecological sustainability in the region?	If yes, why and how?

Step 4: Ending

- Of all the things we discussed, what do you consider the most important?
- Is there anything we have missed, or that you would like to add?
- Would you recommend anyone else we should talk to?
- Do you have information, brochures etc. on your company/projects that you could provide us with?
- In case I have further questions, would it be ok if I get back to you? (contact details)

Thank you!

Interview guideline Caucascert – Expert E7

Step 1: Introduction

- Hello, thank you for your time and for this interview
- Introduction of AMIES II project (Project: "AMIES II - Scenario development for sustainable land use in the Greater Caucasus, Georgia", Unit D1)
- Ilia State University, Tbilisi State University and the Agricultural University of Georgia together with Justus Liebig University Giessen and the Center for International Development and Environmental Research (ZEU). The overall objective of is to foster sustainable land use and improve socio-economic conditions of the population of the Stepantsminda Region. Project unit D1 analyzes bottlenecks in agri-food value chains and aims at identifying efficient marketing structures of local food products, also with regard to tourism. In the project unit that I am involved in, we would like to learn more about agriculture and tourism, and potential linkages of both sectors, in particular with regard to regional food. Our geographical focus is on the Kazbegi region.
- I have already conducted some explorative interviews and focus group discussions with local farmers and guesthouse owners, but now I would like to get some more detailed background information.
- As you are director of Caucascert, I am sure that your knowledge will be very valuable for our project.

  Before starting, I would like to know from you if it is ok for you if we record the interview? This is only for research purposes, if you prefer, no names will be published, all results will be used without referring to a name/anonymously. Do you agree on this? (Handing out the *declaration of consent*, signature (one for the interviewee, one for the interviewer)

Step 2: Warm-up

Let us start with a short introduction of yourself and your occupation

- What is your professional background?
- What is your current occupation?
- What are the main objectives organization you currently work for?

Step 3: Thematic blocks

1) **Role of organic products**

- What is the role of organic products in Georgian agriculture?
- For Georgian smallholders?

2) Awareness

- How is the awareness on organic products of producers?
- How is the awareness of consumers? Demand?

3) Certification process

- What is included in the certification process?
- How does the certification process work?
    a. What are the requirements?
    b. How do you control that?
- What are the advantages for a farmer, smallholder to get certification? Why should he do it?
- What are hurdles? How costly is that for a farmers?
- Who supports farmers in this regard?

4) Certification in the Kazbegi region and in Georgia

- If you think about Kazbegi, do you think certification would be helpful there?
    a. How could it work, be implemented?
    b. Does it make sense, if you do not think about exports?
    c. Are there any cases you know from Kazbegi? Other mountainous regions?
- Which products are mainly certified in Georgia?
- Which products might have potential to be certified in Kazbegi?

5) As you know, we already conducted some other interviews and FGD. Some products were mentioned very often: I would like to know your opinion on the potential to certify these products (in Kazbegi region)

What is your opinion on the potential to certify the following products?	
Honey Dairy products Meat (cattle, sheep, pigs, poultry, rabbits) Trout Potatoes Vegetables (lettuce, broccoli, etc.) Strawberries Other berries, blackcurrant, sea buckthorn Herbs (medicinal plants, tea)	Financial investment Knowledge Government support Hygiene conditions Processing facilities Quality guarantee schemes Branding Certification Organic products
If you had to select one product which one would you choose?	

Additional info sheet (printed separately and put on the table for the interviewee):

Production	***Marketing***	***Cooperative***	***Linkages to tourism***

Production	***Marketing***

Honey
Dairy
Meat (cattle, sheep, pigs, poultry, rabbits)
Trout
Potatoes
Vegetables (lettuce, broccoli, etc.), Reactivation of greenhouses
Strawberries
Other berries, blackcurrant, sea buckthorn
Herbs (medicinal plants, tea)
Beer
Caucasian fir (Nordmanntanne)

8) Other

Other questions on the region	
Anything else you would add, which is important for the Kazbegi region, with regard to agriculture, tourism and potential linkages of agriculture and tourism?	

Step 4: Ending

- Of all the things we discussed, what do you consider the most important?
- Is there anything we have missed, or that you would like to add?
- Would you recommend anyone else we should talk to?
- Do you have information, brochures etc. on your company/projects that you could provide us with?
- In case I have further questions, would it be ok if I get back to you? (contact details)

Thank you!

Interview guideline Evoluxer – Expert E8

Step 1: Introduction

- Hello, thank you for your time and for this interview
- Introduction of interviewer/myself (exchange of business cards)
- Introduction of AMIES II project (Project: "AMIES II - Scenario development for sustainable land use in the Greater Caucasus, Georgia", Unit D1)
- Ilia State University, Tbilisi State University and the Agricultural University of Georgia together with Justus Liebig University Giessen and the Center for International Development and Environmental Research (ZEU). The overall objective of is to foster sustainable land use and improve socio-economic conditions of the population of the Stepantsminda Region. Project unit D1 analyzes bottlenecks in agri-food value chains and aims at identifying efficient marketing structures of local food products, also with regard to tourism. In the project unit that I am involved in, we would like to learn more about agriculture and tourism, and potential linkages of both sectors, in particular with regard to regional food. Our geographical focus is on the Kazbegi region.
- I have already conducted some explorative interviews and focus group discussions with local farmers and guesthouse owners, but now I would like to get some more detailed background information.
- As you are involved in the ENPARD project, I am sure that your knowledge will be very valuable for our project.

  Before starting, I would like to know from you if it is ok for you if we record the interview? This is only for research purposes, if you prefer, no names will be published, all results will be used without referring to a name/anonymously. Do you agree on this? (Handing out the *declaration of consent*, signature (one for the interviewee, one for the interviewer)

Step 2: Warm-up

Let us start with a short introduction of yourself and your occupation

- What is your professional background?
- What is your current occupation?
- What are the main objectives/activities of the project/company you currently work for?

Step 3: Thematic Blocks

1) Agri-food chains – bottlenecks and potentials

Content/Main questions	**Follow up**
How does the agri-food chain in Kazbegi/Georgia look like?	Input supply (finance, technical equipment..), production, processing, marketing (in general and to tourists), relations between value chain actors, market conditions (hurdles and potentials)

2) Marketing of agri-food products

What are the main hurdles and opportunities of marketing regional agricultural products?	
Content/Main questions	**Follow up**
Description of **marketing of agricultural food products**: How do the food producing households or smallholder farmers (in Kazbegi) currently market their products?	Which products are sold? Where? How are the products brought to the market place? Is a processor or trader involved? Which role does barter play? (What is the percentage of products sold and used for own consumption?)
Where do you see **opportunities** for better marketing their products?	In your opinion, which products have potential for marketing? (What do you think about the relation of marketing agricultural products and the growing tourism sector?)
What are the main **problems and hurdles** with regard to marketing agri-food products?	What kind of restrictions do people in Kazbegi face (Financial restrictions, manpower, access to land and market, absence of processing units, bargaining power of traders, seasonality, etc.)? What should be improved?

3) Cooperation and cooperatives

Content/Main questions	**Follow up**
How are agricultural cooperatives In Georgia organized?	How many members (difference in mountainous regions), managerial structures, who supports the establishment? Requirements
What kind of cooperatives?	More production or marketing oriented (first level, second level)? Where does processing take place (e.g. in the case of dairy products)? For which products?
What are the advantages for farmers in joining a cooperative?	Costs, equipment, etc.
Willingness to cooperate?	Relation to former kolkhoz system? Which role does trust play?

Who is buying products from the cooperatives?	Intermediaries? Directly selling to supermarkets or other buyers?
What are the advantages for the buyers when buying from a cooperative?	Food safety, quantity
Which **problems** do you see with regard to cooperation with other producers?	What are the restrictions (financial, management skills, willingness, etc.)? What do you think about the importance of mutual trust with regard to cooperation between producers? Do people in the region associate cooperatives with former Soviet kolkhoz system?
Example of cooperative from Kazbegi: Established but not producing. How could such problems be overcome?	

4) Cooperation in the Kazbegi region

Content/Main questions	**Follow up**
Description of **cooperation among producers**: Is there any cooperation with regard to production or marketing the products in Kazbegi? If yes, please describe	How exactly is that organized (formal, informal)? For which products? If not, why not? How many (officially registered and unofficially), in which field, more production or marketing oriented? How are they organized? Supported? How many are really active?
Which **opportunities** do you see with regard to cooperation with other producers?	For which products? What type of cooperative (production, processing, marketing)

5) Marketing mechanisms of regional food, tourism

As one of our objectives is to identify efficient marketing mechanisms of agri food products, also in relation to tourism, I have prepared some questions in this regard as well:

Content/Main questions	**Follow up**
According to your assessment, what could be potential linkages of the agri-food chain with tourism?	What are connecting points of agri-food chain actors and tourists as the end consumer? (Hotels, guesthouses, local dishes, problems? Advantages of local food?)
In your opinion, could the establishment of a marketing cooperative or a cooperative shop be suitable to offer local food products to tourists? (including selling of "food souvenirs")	How exactly could this be implemented? Which parts of the value chain should be covered (also processing?)? Which role does trust play in this regard? In your opinion, are people in the region open to cooperation? Do they associate it with former Soviet farming systems?

	What are or could be hurdles? What are or could be opportunities, advantages? Who could/does support this?
Are there any other options of marketing local agricultural food products that should be considered?	I am thinking of selling at the farm gate etc. Also regarding the provision of food products to the local population? Tourism: Direct marketing/ at the farm gate Sell to bigger hotels Sell in the own guesthouse, restaurant In combination with “agri-activities”, like watching how cheese is produced etc.
How important are organic products in agriculture and agritourism?	How is the awareness of producers on the added value? How is the awareness of the customers? Would/do they pay more for such products? Role of certification?
What is your opinion on developing a regional brand? How could this be conducive for marketing local products?	Use it for products as well, Alpine products, organic, etc. Who has knowledge in branding, how could it be implemented? Best practice from other regions?

6) **As you know, we already conducted some other interviews and FGD. Some products were mentioned very often: I would like to know your opinion on the potential of these products (with regard to production and marketing, cooperatives and linkages to tourists).**

What is your opinion on the potential of the following products?	
Honey Dairy products Meat (cattle, sheep, pigs, poultry, rabbits) Trout Potatoes Vegetables (lettuce, broccoli, etc.) Strawberries Other berries, blackcurrant, sea buckthorn Herbs (medicinal plants, tea) Beer Caucasian fir (Nordmanntanne)	Financial investment Knowledge Government support Hygiene conditions Processing facilities Quality guarantee schemes Branding Certification
If you had to select one product which one would you choose?	And could you please describe why, and how you would produce it and market it to tourists? (Is there another product, you consider to have the highest potential? Which one?)

Additional info sheet (printed separately and put on the table for the interviewee):

Production	***Marketing***	***Cooperative***	***Linkages to tourism***

Production	***Marketing***

Honey
Dairy
Meat (cattle, sheep, pigs, poultry, rabbits)
Trout
Potatoes
Vegetables (lettuce, broccoli, etc.), Reactivation of greenhouses
Strawberries
Other berries, blackcurrant, sea buckthorn
Herbs (medicinal plants, tea)
Beer
Caucasian fir (Nordmanntanne)

7) Other

Other questions on the region	
Are there any best practice examples of agricultural cooperatives in Georgia?	If yes, what did they do? Where? Or examples from Kazbegi?

Step 4: Ending

- Of all the things we discussed, what do you consider the most important?
- Is there anything we have missed, or that you would like to add?
- Would you recommend anyone else we should talk to?
- Do you have information, brochures etc. on your company/projects that you could provide us with?
- In case I have further questions, would it be ok if I get back to you? (contact details)

Thank you!

Interview guideline Rooms Hotel – Expert H1

Step 1: Introduction

- Hello, thank you for your time and for this interview
- Introduction of interviewer/myself (exchange of business cards)
- Introduction of AMIES II project (Project: "AMIES II - Scenario development for sustainable land use in the Greater Caucasus, Georgia", Unit D1)
- Ilia State University, Tbilisi State University and the Agricultural University of Georgia together with Justus Liebig University Giessen and the Center for International Development and Environmental Research (ZEU). The overall objective of is to foster sustainable land use and improve socio-economic conditions of the population of the Stepantsminda Region. Project unit D1 analyzes bottlenecks in agri-food value chains and aims at identifying efficient marketing structures of local food products, also with regard to tourism. In the project unit that I am involved in, we would like to learn more about agri-food value chains, in particular at the stage of marketing the products to the end user. Our geographical focus is on the Kazbegi region.
- I have already conducted some explorative interviews and focus group discussions with local farmers and guesthouse owners, but now I would like to get some more detailed background information.
- As you are managing the Rooms Hotel in Kazbegi Region, I am sure that your knowledge will be very valuable for our project.
- Before starting, I would like to know from you if it is ok for you if we record the interview? This is only for research purposes, if you prefer, no names will be published, all results will be used without referring to a name/anonymously. Do you agree on this? (Handing out the *declaration of consent*, signature (one for the interviewee, one for the interviewer)

Step 2: Warm-up

Let us start with a short introduction of yourself and your occupation

- What is your professional background?
- What is your current occupation?
- What are the main activities of the company and department you currently work for?

Step 3: Thematic Blocks

1) Agri-food chains – bottlenecks and potentials

Content/Main questions	**Follow up**
How does the agri-food chain in Kazbegi look like?	What are the main hurdles? Input supply (finance, technical equipment..), processing, marketing (also with regard tourism), relations between value chain actors, market conditions
Where does the future potential of the agri-food sector lie?	Which roe does the growing number of tourists play?

2) Source of agri-food products

Content/Main questions	**Follow up**
Where do you source agri-food products you offer to your guests?	Where do which products come from? Which region? Do you buy products which are already processed? Who processes them?
Do you also buy local products?	Which products? Relation of regional products compared to products from other regions
What are your main requirements when you buy products?	Quality, food safety, quantity (seasonality)
When buying directly from local individual farmers, how is the relation/ contract situation?	Formal, informal? When are they paid?
What are the main problems you face when buying directly from individual farmers (in Kazbegi)?	Quality? Quantity? Food safety?
What are opportunities, advantages?	Which products, dishes? Quality? Problems?
What could be done to help farmers fulfil the requirements you have?	

3) Cooperatives

Content/Main questions	**Follow up**
Do you also buy from agricultural cooperatives (in the Kazbegi region)?	How is that organized? What kind of cooperatives? Which products? How are they organized? (Where does processing take place?) If not (at least not in Kazbegi), would you prefer buying from a cooperative? (see advantages and disadvantages below)
What are the advantages when buying from cooperatives?	What about quality control? Food safety? Quantity, seasonality
What are disadvantages?	
What could be done to improve agricultural cooperatives from your point of view? (or to make farmers establish cooperatives)	To make it easier for you to cooperate with them?

According to your assessment, are farmers willing to cooperate?	Do they associate it with former the former kolkhoz system? Which role does trust play?

4) **Organic products**

Content/Main questions	**Follow up**
Which role does local, traditional food play at your hotel?	Are there unique agricultural products or food in Kazbegi that you offer? Which ones?
Which role do organic products play?	Which products are organic, where do they come from? How are they certified? In your opinion, what is the added value of regional and/or organic products?
Is there an awareness of your customers on the added value of local and/or organic products?	Is there a demand for regional or organic products among your guests? Are they (or would they be) willing to pay more for it?

5) **Other mechanisms of marketing regional food to tourists**

Content/Main questions	**Follow up**
Which role does the selling of “food” souvenirs related to agriculture play?	Small honey jars, etc. Which products would have potential? Can you provide information about the (potential) demand of the guests at Rooms Hotel?
Would the establishment of a marketing cooperative or a cooperative shop be suitable?	How exactly could this be implemented? Which parts of the value chain should be covered (also processing?)? Who could/does support this?
What is your opinion on developing a regional brand, also with regard to agri-food products?	Alpine products, organic, etc. Who has knowledge in branding, how could it be implemented?

6) **As you know, we already conducted some other interviews and FGD. Some products were mentioned very often: I would like to know your opinion on the potential of these products (with regard to linkages to tourists/being marketed at your hotel).**

What is your opinion on the potential of the following products?	
Honey Dairy products Meat (cattle, sheep, pigs, poultry, rabbits) Trout Potatoes Vegetables (lettuce, broccoli, etc.) Strawberries Other berries, blackcurrant, sea buckthorn Herbs (medicinal plants, tea) Beer Caucasian fir (Nordmanntanne)	Financial investment Knowledge Government support Hygiene conditions Processing facilities Quality guarantee schemes Branding Certification

If you had to select one product which one would you choose?	(Is there another product, you consider to have the highest potential? Which one?)

Additional info sheet (printed separately and put on the table for the interviewee):

Production	***Marketing***	***Cooperative***	***Linkages to tourism***

Production	***Marketing***

Honey
Dairy
Meat (cattle, sheep, pigs, poultry, rabbits)
Trout
Potatoes
Vegetables (lettuce, broccoli, etc.), Reactivation of greenhouses
Strawberries
Other berries, blackcurrant, sea buckthorn
Herbs (medicinal plants, tea)
Beer
Caucasian fir (Nordmanntanne)

7) Other

Other questions on the region	
Are there any “best practice” farmers that you are buying from?	If yes, what did they do, which products? Where? How?
Could marketing of regional food contribute to ecological sustainability in the region?	If yes, why and how?
Are there still any plans to develop a skiing area in Kazbegi?	

Step 4: Ending

- Of all the things we discussed, what do you consider the most important?
- Is there anything we have missed, or that you would like to add?
- Would you recommend anyone else we should talk to?
- Do you have information, brochures etc. on your company/projects that you could provide us with?
- In case I have further questions, would it be ok if I get back to you? (contact details)

Thank you!

Interview guideline Zeta Camp – Expert GH1

Step 1: Introduction

- Hello, thank you for your time and for this interview
- Introduction of interviewer/myself (exchange of business cards)
- Introduction of AMIES II project (Project: "AMIES II - Scenario development for sustainable land use in the Greater Caucasus, Georgia", Unit D1)
- Ilia State University, Tbilisi State University and the Agricultural University of Georgia together with Justus Liebig University Giessen and the Center for International Development and Environmental Research (ZEU). The overall objective of is to foster sustainable land use and improve socio-economic conditions of the population of the Stepantsminda Region. Project unit D1 analyzes bottlenecks in agri-food value chains and aims at identifying efficient marketing structures of local food products, also with regard to tourism. In the project unit that I am involved in, we would like to learn more about agri-food value chains, in particular at the stage of marketing the products to the end user. Our geographical focus is on the Kazbegi region.
- I have already conducted some explorative interviews and focus group discussions with local farmers and guesthouse owners, but now I would like to get some more detailed background information.
- As you are managing the Zeta camp in Kazbegi Region, I am sure that your knowledge will be very valuable for our project.
- Before starting, I would like to know from you if it is ok for you if we record the interview? This is only for research purposes, if you prefer, no names will be published, all results will be used without referring to a name/anonymously. Do you agree on this? (Handing out the *declaration of consent*, signature (one for the interviewee, one for the interviewer)

Step 2: Warm-up

Let us start with a short introduction of yourself and your occupation

- What is your professional background?
- What is your current occupation?
- What are the main activities of the company and department you currently work for?

Step 3: Thematic blocks

1) Agri-food chains – bottlenecks and potentials

Content/Main questions	Follow up
How does the agri-food chain in Kazbegi look like?	What are the main hurdles? Input supply (finance, technical equipment..), processing, marketing (also with regard tourism), relations between value chain actors, market conditions
Where does the future potential of the agri-food sector lie?	Which roe does the growing number of tourists play?

2) Linkages of agriculture and tourism in the Kazbegi region

Content/Main questions	Follow up
According to your assessment, what could be potential linkages of the agri-food chain with tourism?	What are connecting points of agri-food chain actors and tourists as the end consumer?
Which role does local, traditional food play in tourism in Kazbegi?	Are there unique agricultural products or food in Kazbegi? Which ones?
How do guesthouses, hotels, and cafés offer regional food?	Which products, dishes? Quality? Problems?
How important are organic products in agritourism?	How is the awareness of producers on the added value? How is the awareness of the customers? Would/do they pay more for such products? Role of certification?
Which role does the selling of “food” souvenirs related to agriculture play?	Small honey jars, etc. Which products would have potential?

3) Source of agri-food products at Zeta camp

Content/Main questions	Follow up
Where do you source agri-food products you offer to your guests?	Where do which products come from? Which region? Do you buy products which are already processed? Who processes them?
Do you also buy local products?	Which products? Which produced are not bought locally, and why? Relation of regional products compared to products from other regions Contract situation with local farmers?
Which role does local, traditional food play at Zeta camp?	Are there unique agricultural products or food in Kazbegi that you offer? Which ones?
What are your main requirements when you buy products?	Quality, food safety, quantity (seasonality)
What are the main problems you face when buying directly from individual farmers (in Kazbegi)?	Quality? Quantity? Food safety?
What are opportunities, advantages?	Which products, dishes? Quality? Problems?
What could be done to help farmers fulfil the requirements you have?	

4) **Organic products**

Content/Main questions	Follow up
Which role do organic products play?	Which products are organic, where do they come from? How are they certified? In your opinion, what is the added value of regional and/or organic products?
Is there an awareness of your customers on the added value of local and/or organic products?	Is there a demand for regional or organic products among your guests? Are they (or would they be) willing to pay more for it?

5) **Cooperatives**

Content/Main questions	Follow up
According to your knowledge, are there any agricultural cooperatives in the Kazbegi region?	If yes, for which products? Where? What kind of cooperatives? Which products? How are they organized? (Where does processing take place?)
Do you also buy from agricultural cooperatives (in the Kazbegi region)?	If not (at least not in Kazbegi), would you prefer buying from a cooperative? (see advantages and disadvantages below)
What are (or could be) the advantages when buying from cooperatives?	What about quality control? Food safety? Quantity, seasonality
What are disadvantages?	
According to your assessment, are farmers willing to cooperate?	Do they associate it with former the former kolkhoz system? Which role does trust play? What could be done to make farmers establish cooperatives?
Would the establishment of a marketing cooperative or a cooperative shop be suitable to sell agri-food products (to the local population, to tourists/food-souvenirs)?	How exactly could this be implemented? Which parts of the value chain should be covered (also processing?)? Who could/does support this?

6) **As you know, we already conducted some other interviews and FGD. Some products were mentioned very often: I would like to know your opinion on the potential of these products (with regard to linkages to tourists/being marketed at your hotel).**

What is your opinion on the potential of the following products?	
Honey Dairy products Meat (cattle, sheep, pigs, poultry, rabbits) Trout Potatoes Vegetables (lettuce, broccoli, etc.), reactivation of greenhouses Strawberries Other berries, blackcurrant, sea buckthorn Herbs (medicinal plants, tea) Beer	Financial investment Knowledge Government support Hygiene conditions Processing facilities Quality guarantee schemes Branding Certification

Caucasian fir (Nordmanntanne)	
If you had to select one product which one would you choose?	(Is there another product, you consider to have the highest potential? Which one?)

Additional info sheet (printed separately and put on the table for the interviewee):

Production	***Marketing***	***Cooperative***	***Linkages to tourism***

Production	***Marketing***

Honey
Dairy
Meat (cattle, sheep, pigs, poultry, rabbits)
Trout
Potatoes
Vegetables (lettuce, broccoli, etc.), Reactivation of greenhouses
Strawberries
Other berries, blackcurrant, sea buckthorn
Herbs (medicinal plants, tea)
Beer
Caucasian fir (Nordmanntanne)

7) Other

Other questions on the region	
What is your opinion on developing a regional brand, also with regard to agri-food products?	Alpine products, organic, etc. Who has knowledge in branding, how could it be implemented?
Are there any best practice examples of farmers who implemented tourism measures closely related to the agri-food chain?	If yes, what did they do? Where?
News on hotel in the center of Juta?	Where do they source agri-food products? Other new agricultural or touristic activities?
Which projects are currently going on in the Kazbegi region (in the field of agriculture and/or tourism)?	Development organizations Government
Could marketing of regional food contribute to ecological sustainability in the region?	If yes, why and how?
I heard that in another region, they will introduce a map for tourists, which will show places where tourists can eat, buy local food, cheese, souvenirs etc. What is your opinion on something like that in Kazbegi?	Could it be valuable for the local population? (in terms of income) Other option: Local food tours?

Step 4: Ending

- Of all the things we discussed, what do you consider the most important?
- Is there anything we have missed, or that you would like to add?
- Would you recommend anyone else we should talk to?
- Do you have information, brochures etc. on your company/projects that you could provide us with?
- In case I have further questions, would it be ok if I get back to you? (contact details)

Thank you!

Interview guideline Goodwill – Expert S1

Step 1: Introduction

- Hello, thank you for your time and for this interview
- Introduction of interviewer/myself (exchange of business cards)
- Introduction of AMIES II project (Project: "AMIES II - Scenario development for sustainable land use in the Greater Caucasus, Georgia", Unit D1)
- Ilia State University, Tbilisi State University and the Agricultural University of Georgia together with Justus Liebig University Giessen and the Center for International Development and Environmental Research (ZEU). The overall objective of is to foster sustainable land use and improve socio-economic conditions of the population of the Stepantsminda Region. Project unit D1 analyzes bottlenecks in agri-food value chains and aims at identifying efficient marketing structures of local food products, also with regard to tourism. In the project unit that I am involved in, we would like to learn more about agri-food value chains, in particular at the stage of marketing the products to the end user. Our geographical focus is on the Kazbegi region.
- I have already conducted some explorative interviews and focus group discussions with local farmers and guesthouse owners, but now I would like to get some more detailed background information.
- As you are heading the quality department of Goodwill, I am sure that your knowledge will be very valuable for our project.
- Before starting, I would like to know from you if it is ok for you if we record the interview? This is only for research purposes, if you prefer, no names will be published, all results will be used without referring to a name/anonymously. Do you agree on this? (Handing out the *declaration of consent*, signature (one for the interviewee, one for the interviewer)

Step 2: Warm-up

Let us start with a short introduction of yourself and your occupation

- What is your professional background?
- What is your current occupation?
- What are the main activities of the company and department you currently work for?

Step 3: Thematic blocks

1) Agri-food chains – bottlenecks and potentials

Content/Main questions	Follow up
How does the agri-food chain in Georgia look like?	What are the main hurdles? Input supply (finance, technical equipment..), processing, marketing, relations between value chain actors, market conditions
Where does the future potential of the agri-food sector lie?	

2) Procurement of agri-food products

Content/Main questions	Follow up
How is the process of procurement of agri-food products at Goodwill organized?	Where do which products come from? Which region? Do you buy products which are already processed? Who processes them?
What are your main requirements when you buy products?	Quality, food safety, quantity (seasonality)
Who are your cooperation partners?	Distributers? Farmers? Processing companies? Which partner for which products?
When buying directly from individual farmers, how is the relation/ contract situation?	Formal, informal? When are they paid?
What are the main problems you face when buying directly from individual farmers?	Quality?
What are opportunities, advantages?	Which products, dishes? Quality? Problems?
What could be done to help farmers fulfil the requirements you have?	

3) Cooperatives

Content/Main questions	Follow up
Do you also buy from agricultural cooperatives?	How is that organized? What kind of cooperatives? How are they organized? Where does processing take place?
What are the advantages when buying from cooperatives?	What about quality control? Food safety? Quantity, seasonality
What are disadvantages?	
What could be done to improve agricultural cooperatives from your point of view?	To make it easier for you to cooperate with them?
According to your assessment, are farmers willing to cooperate?	Do they associate it with former the former kolkhoz system? Which role does trust play?

4) Marketing

Content/Main questions	Follow up
Which role does selling of regional agri-food products play at Goodwill?	In comparison to imported products? Which products mainly?

Where do you see opportunities with regard to selling more regional food products?	
What are hurdles?	
Which role do organic products play?	Which products are organic, where do they come from? How are they certified?
In your opinion, what is the added value of regional and/or organic products?	
Is there an awareness of your customers on the added value of regional and/or organic products?	Are the willing to pay more for it?

5) Opportunities with regard to Kazbegi

Content/Main questions	**Follow up**
Do you sell any products from the Kazbegi region?	If yes, which ones? How does it work? If no, why not?
According to your knowledge, which products from the region could have potential to be sold at Goodwill?	Honey Dairy products Meat (cattle, sheep) Trout Potatoes Vegetables (lettuce, broccoli, etc.) Strawberries Other berries, blackcurrant, sea buckthorn Herbs (medicinal plants, tea) Beer
What is your opinion on regional branding with regard to Kazbegi?	Alpine products, organic, etc. Could agri-food products with a clear reference to the Kazbegi region (Kazbegi label) be marketed better? Who would have the knowledge and power to implement regional branding initiatives?
Which conditions should be met in order to enable you to sell products from the Kazbegi region?	

Step 4: Ending

- Of all the things we discussed, what do you consider the most important?
- Is there anything we have missed, or that you would like to add?
- Would you recommend anyone else we should talk to?
- Do you have information, brochures etc. on your company/projects that you could provide us with?
- In case I have further questions, would it be ok if I get back to you? (contact details)

Thank you!

Annex 3: Graphs and Tables

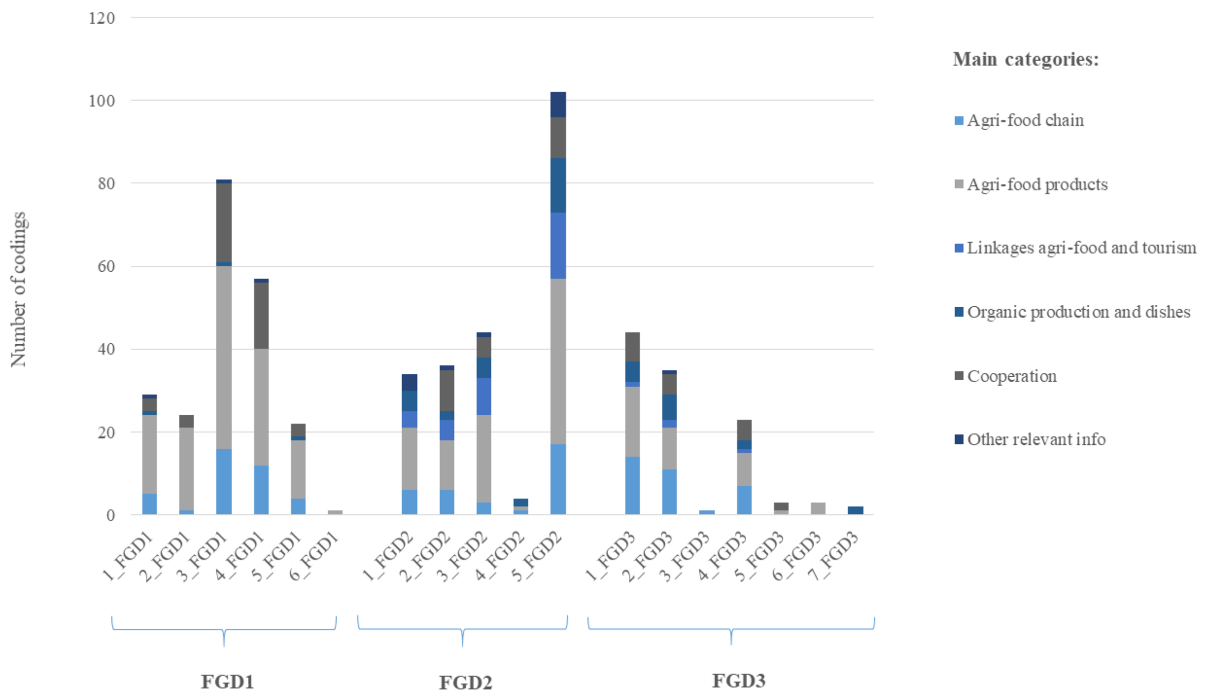


Figure 19: Number of codings per main category and focus group participant

Source: Own depiction based on data of the focus group discussions. 1_FGD1 stands for participant 1 of FGD1, 2_FGD1 for participant 2 of FGD1 and so on.

Table 10: Co-occurrence of (sub)categories of the focus group discussions

Main category	**Agri-food chain**				**Agri-food products**											
Subcategory (Abbreviation of terms)	**Bottlenecks**	**Oppor-tunities**	**Marketing and delivery**	**Other info agri-food chain**	**Beer**	**Bread**	**Dairy**	**Fish (trout)**	**Fruits and berries**	**Herbs, tea and spices**	**Honey**	**Lettuce**	**Meat**	**Pota-toes**	**Vege-tables**	**Other**
Bottlenecks			5								1	1		1		
Opportunities											1					
Marketing and delivery	5						3		1			1	1	2	3	
Other info agri-food chain																
Beer																
Bread							1									1
Dairy			3			1			1				7	4	1	
Fish (trout)																
Fruits and berries			1				1					3	1	3	6	
Herbs, tea and spices																
Honey	1	1										1		1	2	
Lettuce	1		1						3		1		1	5	5	
Meat			1				7		1		0	1		4	2	
Potatoes	1		2				4		3		1	5	4		5	
Vegetables			3				1		6		2	5	2	5		2
Other						1									2	
Relation			1				1									
Sourcing							6		1				5	3	2	1
Requirements			1				2		1				2			
Other hurdles																
Ideas											1					
Certification					1									1		
Role of organic																
Special products and dishes						2	1						1			
Pro cooperation			1	1							1					
Contra cooperation			1													
Role of trust							1							1		
Situation Georgia and Kazbegi				1			1				2					
Other relevant info							0									

Main category	Linkages between the agri-food and the tourism sector					Organic production and special dishes			Cooperation				Other relevant info
Subcategory	Relation	Sourcing	Requirements	Other hurdles	Ideas	Certification	Role of organic	Special products and dishes	Pro cooperation	Contra cooperation	Role of trust	Situation Georgia and Kazbegi	
Bottlenecks													
Opportunities													
Marketing and delivery	1		1						1	1			
Other info agri-food chain									1			1	
Beer						1							
Bread								2					
Dairy	1	6	2					1			1	1	
Fish (trout)													
Fruits and berries		1	1										
Herbs, tea and spices													
Honey					1				1			2	
Lettuce													
Meat		5	2					1					
Potatoes		3				1					1		
Vegetables		2											
Other		1											
Relation			1										
Sourcing											2		
Requirements	1												
Other hurdles													1
Ideas								1					
Certification													
Role of organic								1					
Special products and dishes					1		1						
Pro cooperation										2		1	
Contra cooperation									2		3	1	
Role of trust		2								3			
Situation Georgia and Kazbegi									1	1			
Other relevant info				1									

Source: Own depiction based on data of the focus group discussions.

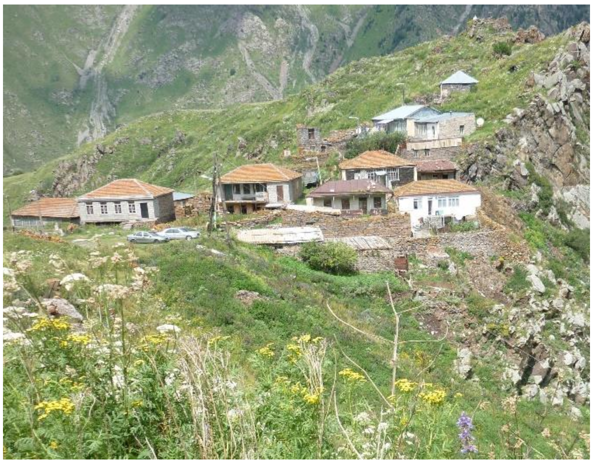
Table 11: Co-occurrence of (sub)categories of the expert interviews

Main category	Agri-food chain				Agri-food products											
Subcategory (Abbreviation of terms)	**Bottlenecks**	**Oppor-tunities**	**Marketing and delivery**	**Other info agri-food chain**	**Beer**	**Bread**	**Dairy**	**Fish (trout)**	**Fruits and berries**	**Herbs, tea and spices**	**Honey**	**Lettuce**	**Meat**	**Pota-toes**	**Vege-tables**	**Other**
Bottlenecks			12			1	2		1	1	3		1	3	1	
Opportunities							1		1		1			1		
Marketing and delivery	12					1	2		1		2	1		1	1	
Other info agri-food chain							2	1			1			1		
Beer							1	1		1	2				1	1
Bread	1		1				5	2	1	1	2	1	1	1		2
Dairy	2	1	2	2	1	5		7	3	1	11	2	7	5	3	4
Fish (trout)				1	1	2	7		1	1	5	1	5	3	1	3
Fruits and berries	1	1	1			1	3	1		1	2	1	2	1	2	1
Herbs, tea and spices	1				1	1	1	1	1		7		2	2	1	
Honey	3	1	2	1	2	2	11	5	2	7		3	4	5	4	2
Lettuce			1			1	2	1	1		3		1		3	1
Meat	1					1	7	5	2	2	4	1		2	2	2
Potatoes	3	1	1	1		1	5	3	1	2	5		2		1	
Vegetables	1		1		1		3	1	2	1	4	3	2	1		1
Other					1	2	4	3	1		2	1	2		1	
Relation	1					1		1								
Sourcing				1		5	13	8	5	3	9	6	8	5	2	3
Requirements							6		2		4		4	2		
Other hurdles	4		2			1	2			1						
Ideas			1	1		3	2	1		2	4					1
Certification		2			1		1	1	4	2	2		4	1	1	1
Role of organic								1	1	2	3					
Special products and dishes						5	2			1	1			1		1
Pro cooperation							1									
Contra cooperation																
Role of trust																
Situation Georgia and Kazbegi				1			1				1		1			
Other relevant info						1										

Main category	**Linkages between the agri-food and the tourism sector**					**Organic production and special dishes**			**Cooperation**				**Other relevant info**
Subcategory	Relation	Sourcing	Requirements	Other hurdles	Ideas	Certification	Role of organic	Special products and dishes	Pro cooperation	Contra cooperation	Role of trust	Situation Georgia and Kazbegi	
Bottlenecks	1			4									
Opportunities						2							
Marketing and delivery				2	1								
Other info agri-food chain		1			1							1	
Beer						1							
Bread	1	5		1	3			5					1
Dairy		13	6	2	2	1		2	1			1	
Fish (trout)	1	8			1	1	1						
Fruits and berries		5	2			4	1						
Herbs, tea and spices		3		1	2	2	2	1					
Honey		9	4		4	2	3	1				1	
Lettuce		6											
Meat		8	4			4						1	
Potatoes		5	2			1		1					
Vegetables		2				1							
Other		3			1	1		1					
Relation				1			1						
Sourcing			4		1		2	1				1	1
Requirements		4			1		3						
Other hurdles	1				2								
Ideas		1	1	2			2	4				2	
Certification							2						
Role of organic	1	2	3		2	2							
Special products and dishes		1			4								
Pro cooperation										1		1	
Contra cooperation									1		2	4	
Role of trust										2		2	
Situation Georgia and Kazbegi		1			2				1	4	2		
Other relevant info		1											

Source: Own depiction based on data of the expert interviews.

Annex 4: Photos



Picture 1: Tsdo

Picture 2: Depopulated village

Picture 3: Cattle in Sno valley

Picture 4: Sheep in Sno valley

Picture 5: Potato field in Akhaltsikhe

Picture 6: Demolished greenhouse in Sioni

Picture 7: Handmade dairy products

Picture 8: Extraction of honey

Picture 9: Market stand in Stepantsminda

Picture 10: Small shop in Gergeti

Picture 11: New and old building of a guesthouse in Gergeti

Picture 12: Zeta Camp in Juta

Picture 13: Rooms Hotel in Stepantsminda

Picture 14: Village Pkhelshe

Picture 15: Village Goristsikhe

Picture 16: Center of the village Kanobi

Picture 17: Restaurant in Arsha

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დიდი მადლობა! Didi madloba!

Eidesstattliche Erklärung

Ich erkläre: Ich habe die vorgelegte Dissertation selbständig, ohne unerlaubte fremde Hilfe und nur mit den Hilfen angefertigt, die ich in der Dissertation angegeben habe. Alle Textstellen, die wörtlich oder sinngemäß aus veröffentlichten Schriften entnommen sind, und alle Angaben, die auf mündlichen Auskünften beruhen, sind als solche kenntlich gemacht. Bei den von mir durchgeführten und in der Dissertation erwähnten Untersuchungen habe ich die Grundsätze guter wissenschaftlicher Praxis, wie sie in der "Satzung der Justus-Liebig-Universität Gießen zur Sicherung guter wissenschaftlicher Praxis" niedergelegt sind, eingehalten.

Karben, den 23.04.2019 ________________________